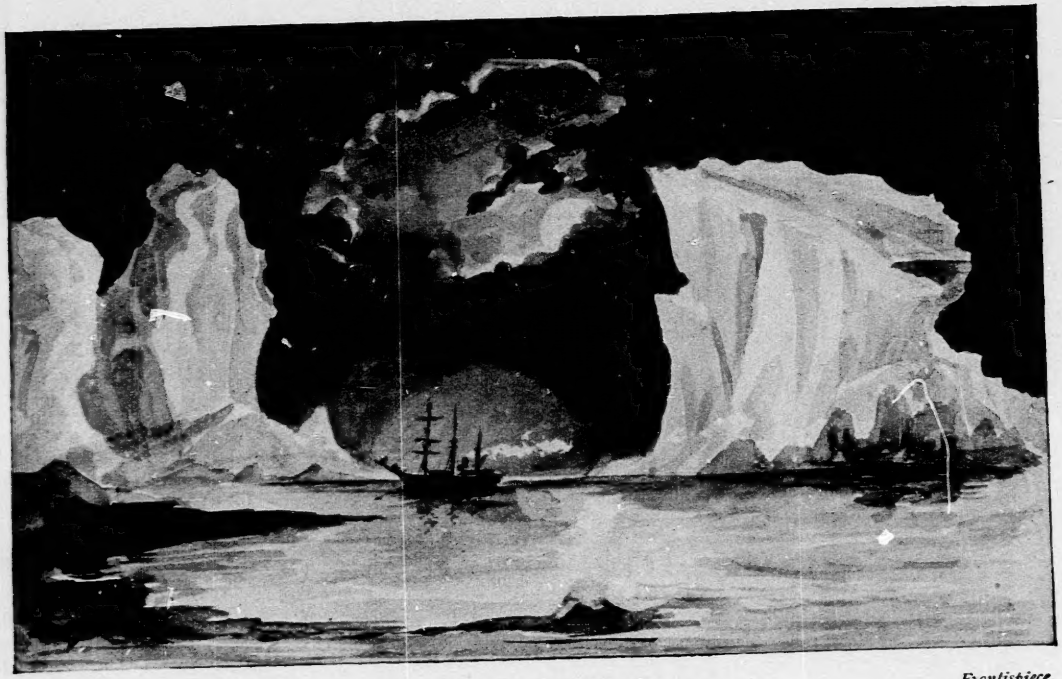


THE "KITE" AMONG THE BERGS. *Frontispiece.*

Frontispiece.

THE "KITE" AMONG THE BERGS.

ARCTIC SEAS

PEARY EXPEDITION

LOG OF THE "KITE"

BY

ROBERT N. KEELY, JR., M. D.

Surgeon to the Expedition sent by the Academy of Natural Sciences to accompany Lieutenant Peary; Member of the Geographical Club of Philadelphia, etc.

AND

G. G. DAVIS, A. M., M. D., M. R. C. S.

Member of the Archæological Association of the University of Pennsylvania, etc.

Illustrated by Maps, Portraits and Photographic Views

PHILADELPHIA

RUFUS C. HARTRANFT

1892

THE "[illegible]" AMONG THE BERGS. *Frontispiece.*

IN ARCTIC SEAS

The Voyage of the "KITE"

WITH THE

PEARY EXPEDITION

TOGETHER WITH A TRANSCRIPT OF THE

LOG OF THE "KITE"

BY

ROBERT N. KEELY, JR., M. D.

Surgeon to the Expedition sent by the Academy of Natural Sciences to accompany Lieutenant Peary; Member of the Geographical Club of Philadelphia, etc.

AND

G. G. DAVIS, A. M., M. D., M. R. C. S.

Member of the Archæological Association of the University of Pennsylvania, etc.

Illustrated by Maps, Portraits and Photographic Views

PHILADELPHIA

RUFUS C. HARTRANFT

1892

NW
998
K26

COPYRIGHT, 1892,
BY RUFUS C. HARTRANFT,

ALL RIGHTS RESERVED.

PRESS AND BINDERY OF
HISTORICAL PUBLISHING CO.
PHILADELPHIA, PA.

PUBLISHER'S PREFACE.

The work herewith presented to the reader is divided into two separate but closely related parts. The first part, "The Voyage of the *Kite*," is the narrative of the expedition sent in 1891 to convey Lieut. Peary to the northwestern shore of Greenland; the second, under the general title of "The Peary Relief Expedition," is a record of the second voyage of the same vessel in the present year, when she was sent to bring the party home again.

Added to the account of the two voyages is a transcript of the log-book of Captain Pike, the commander of the ship on both expeditions; a number of facts relating to Mr. Verhoeff, the only missing member of either party, with letters from his relatives giving the arguments in favor of their belief that he is still alive, and the correspondence between the young man and Lieut. Peary anterior to his joining the expedition. The search for Verhoeff is minutely described, and the certificate respecting the same, signed by Captain Pike and his chief officer, is reproduced. Besides

166503

this, there are chapters on the winter life of the Peary party north, and on the journey of Lieut. Peary across the inland ice of Greenland. This journey was in many respects the most wonderful of all voyages of discovery in modern times. It was not made across the sea as was Columbus', nor over the land as was that of Stanley; it was made across the ice—as pathless as the sea, as crowded with formidable obstacles as is the heart of Africa, and was made under discouraging circumstances by two men comparatively unused to Arctic travel.

The great and startling discoveries made by the expeditions were summarized in the report presented by Lieut. Peary to the Academy of Natural Sciences, the substance of which is included in an Appendix. The volume thus forms a complete and authentic record of one of the most successful journeys ever made by any exploring party to the frozen North.

A brief history of Arctic voyages from the earliest times to the present day has been appended in the belief that it would be useful for handy reference.

PREFACE.

THE authors have requested me to write a preface to their story of the *Kite*'s voyage to the far North. I have gladly consented, because I not only have a full knowledge of the voyage itself, but also of the book, the authors of which have been my intimate friends for many years. The book needs no apology. At a time when the whole country is interested in the efforts to rescue the little band of daring explorers who have risked their lives in the cause of science, everything that relates to their journey possesses value, particularly when it is told by one familiar with the members and with the circumstances surrounding their journey to the North. The sentimental interest relating to their fate is scarcely less than was felt concerning that of Sir John Franklin. In the one case it was the sympathy for a devoted wife which caused expedition after expedition to be sent out in search of her courageous husband. In this case another devoted wife refused to leave her husband's side, but has faced the terrors of an Arctic winter with him, and it is to rescue and relieve her that the sympathy of the people has been awakened. The relief expedition has the prayers of a nation that its quest may be successful.

But the present book has an interest quite its own in that it relates, in a straightforward way, exactly what was seen and heard by Dr. Keely on his voyage to the North, and which was recorded with fidelity in a diary which he kept from day to day. The expedition, of which Dr. Keely and myself had the honor to be members, had exceptional opportunities to see the life and customs of the natives of Northern Greenland. Most of the expeditions to the Arctic regions have been in haste to reach the farthest possible north, and on their return were interested only in reaching civilization. The *Kite*, however, steamed leisurely back, stopping wherever points of interest existed, thus allowing the members of the party to become fairly familiar with the natives and the desolate country which they inhabit. Those things which were of special interest were faithfully recorded in Dr. Keely's diary, which proved the basis of the present work.

Although this was his first voyage to the Arctic regions, Dr. Keely was already experienced in travel and with meeting strange people. He had visited not only most of the countries of Europe, but also many of the States of Central and South America, and his powers of observation, thus quickened, grasped many interesting things which would have escaped one less familiar with the world and its people.

The aid which he received from Dr. Gwilym George Davis was invaluable. Not only with his pencil (for the sketches which illustrate the work were made by him), but also with his pen, he has devoted himself, with untiring industry, to the task of making readable and valu-

able this book of Arctic travel. My own share in the work has been confined to the writing out of certain facts and incidents of which I had special knowledge. I feel that I have little claim to either credit or thanks, but am proud of an opportunity to have my name connected with a work which, I am sure, will be a source of pride to the authors and of usefulness to the general public.

Dr. Keely and Dr. Davis have asked me to thank particularly Prof. Benj. Sharp and Prof. Jacob F. Holt for the generous use they have permitted of their photographs, from which a large number of the plates illustrating this volume have been made. Thanks are also due to Prof. Angelo Heilprin for similar courtesies, and to John J. McKenna, Esq., of Philadelphia, for several acts of kindness.

W. H. BURK.

CONTENTS.

List of Illustrations 9–12

PART I.

THE VOYAGE OF THE "KITE" 15–215

Introduction 15

CHAPTER I.

The Start.—Captain Pike.—Our Crew.—The Land of Evangeline.—Arrival at Sydney.—Coaling for the Voyage 23

CHAPTER II.

Crossing the Gulf of St. Lawrence.—Our First Ice.—An Abandoned Boat.—In the Midst of the Floe.—Newfoundland Fishermen.—Off for Cape Desolation 31

CHAPTER III.

First Sight of Greenland.—Icebergs.—Disko Island.—Arrival at Godhavn.—Visit of Eskimos.—Dining with the Governor.—Native Huts 42

CHAPTER IV.

A Native Dance.—Polaris Henrick.—Religion of the Eskimos.— Mode of Government. — Mosquitoes. — A Plunge in the Arctic Ocean.—The Native Appetite . 59

CHAPTER V.

Farewell to Godhavn.—Arrival at Upernavik.—Notice to Mariners in the Davis Straits. - The Settlement and its Inhabitants.—Duck Islands. 75

CHAPTER VI.

Collapsing of an Iceberg.—In the Melville Bay Pack.—Floes and Pans.—Butting the Ice.—Arctic Sport.—Lieut. Peary Breaks His Leg 85

CHAPTER VII.

An Accident to the Ship.—Nipped in the Ice.—Blasting.—We Kill a Bear.—Table Icebergs.—Cape York Sighted.—Drifting with the Pack 99

CHAPTER VIII.

Free Once More.—Cape Parry and Whale Sound.—An Eskimo Village.—The Natives. - Contrast with the Fuegians.—Relics from Eskimo Graves 114

CHAPTER IX.

Herbert Island.—Fox-traps —A Green Spot Among the Glaciers. — McCormick Bay. — Choosing a Spot for Peary's Camp.—Building the House. A Climb to the Ice-cap 127

CHAPTER X.

A School of White Whales.—Bidding Good-by to the Peary Party.—An Arctic Storm.—Growlers.—Saunders Island.—Southward Bound.—Crimson Cliffs.—Red Snow.—The Cape York Natives.—An Eskimo Tailor 141

CHAPTER XI.

Arctic Clothing.—A Sledge-ride.—An Indignant Eskimo Lady.—The Native Dogs.—Sledges 159

CHAPTER XII.

Bows and Arrows.—Spears and Harpoons.—Hunting the Seal and Walrus.—Scarcity of Wood.—Children's Toys.—"Mickey" and His Doings 167

CHAPTER XIII.

Ascending the Iron Mountains.—Greenland Glaciers.—Again on our Way Home.—Through Waigate Channel.—A Glorious Sunset.—Searching for Coal Deposits 185

CHAPTER XIV.

At Godhavn Once More.—Meteorites.—The Land of Desolation.—Taking on Ballast.—On the Open Sea.—Night Begins.—Off the Coast of Labrador.—Approaching St. Johns.—Our Reception.—A Review of the Trip 198

PART II.

THE RELIEF OF PEARY AND THE LOG OF THE "KITE," ETC. 219–524

INTRODUCTION 219–224

THE LOG OF THE "KITE" 225–265

THE PEARY RELIEF EXPEDITION 267–524

CHAPTER I.

THE RELIEF EXPEDITION.—ITS CONCEPTION.—GOODS FOR FREE DISTRIBUTION AMONG THE NORTHERN ESKIMOS.—SKETCHES OF THE MEMBERS OF THE EXPEDITION 267

CHAPTER II.

THE START.—THE MIRANDA.—FROM BROOKLYN TO HALIFAX.—IN A DENSE FOG 274

CHAPTER III.

HALIFAX.—ITS HOUSES, STREETS, AND DOCKS.—A LATE SPRING.—ARCTIC EXPLORERS.—WM. SAUNDERS UNDER FIRE 280

CHAPTER IV.

FIRST ICEBERGS.—ST. JOHNS BEFORE THE FIRE.—THE "KITE'S" OFFICERS AND CREW 288

CHAPTER V.

LEAVING ST. JOHNS.—THE NEWFOUNDLAND COAST.—SOLOMON GOSS.—THE ARCTIC CIRCLE.—ARRIVAL AT GODHAVN . 297

CHAPTER VI.

OFFICIAL RECOGNITION OF THE EXPEDITION.—AN ESKIMO INTERPRETER.—CLIMBING A GLACIER.—IN MELVILLE BAY 307

CHAPTER VII

THE CAPE YORK AND NEHELUMIE ESKIMOS.—DISTRIBUTION OF GIFTS.—MEETING GIBSON, DR. COOK, AND VERHOEFF 318

CHAPTER VIII.

NEWS OF THE SHIP'S ARRIVAL TAKEN TO MRS. PEARY.—ESKIMO SIGNS OF AGE.—ATTACKING THE ICE-CAP 329

CHAPTER IX.

IN SMITH SOUND.—HAYES' WINTER QUARTERS.—THE ICE BARRIER.—WALRUS HUNTING.—THE ETAH AND OTHER EXTREME NORTHERLY SETTLEMENTS 335

CHAPTER X.

CAMPING ON ROBERTSON BAY.—THE ANGEKOK.—THE FUGITIVE WIFE AND DAUGHTER.—A FOSSIL GLACIER 350

CHAPTER XI.

THE RELIEF EXPEDITION MAKES A RECONNOISSANCE OF THE INLAND ICE, AND MEETS LIEUT. PEARY AND MR. ASTRUP 356

CHAPTER XII.

THE PEARY PARTY'S WINTER LIFE.—LAYING IN STORES.—THE ARCTIC NIGHT.—PREPARATIONS FOR THE INLAND JOURNEY.—THE START 365

CHAPTER XIII.

THE JOURNEY OVER THE INLAND ICE.—IMPORTANT GEOGRAPHICAL DISCOVERIES. — GREENLAND AN ISLAND.—INDEPENDENCE BAY.—THE RETURN 379

CHAPTER XIV

THE "KITE" IN TROUBLE.—THE PEARY PARTY ON INGLEFIELD GULF.—THE RELIEF PARTY IN CAMP.—A MURCHISON SOUND GLACIER.—HEAVY GALES AND ROUGH EXPERIENCES. — MR VERHOEFF MISSING. — PREPARATIONS FOR SEARCH 398

CHAPTER XV.

THE SEARCH FOR MR. VERHOEFF.—HOW IT WAS CONDUCTED.—FIVE GLACIER VALLEY.—TRACES OF THE MISSING MAN.—EVIDENCES OF HIS DEATH.—ABANDONMENT OF THE SEARCH 407

CHAPTER XVI.

LEAVING MCCORMICK BAY.—SORROWING NATIVES.—NEARLY ICE-BOUND.—A BEAR KILLED.—ARRIVAL AT GODHAVN — YANKEE DOODLE IN GREENLAND.—AN AURORA 420

CHAPTER XVII.

GODTHAAB.—THE OLD NORSEMEN.—AN ESKIMO NEWSPAPER.—FAREWELL TO GREENLAND 429

CHAPTER XVIII.

THE "KITE'S" GHOST.—THE RETURN TO ST. JOHNS.—DEPARTURE FOR PHILADELPHIA.—THE TRIUMPHAL PROCESSION UP THE DELAWARE.—RECEPTION BY THE ACADEMY OF NATURAL SCIENCES 445

APPENDIX I.

THE PEARY-VERHOEFF CORRESPONDENCE, AND OTHER MATTERS RELATING TO JOHN M. VERHOEFF, THE MISSING MEMBER OF THE PEARY NORTH GREENLAND EXPEDITION 461

APPENDIX II.

LIEUT. PEARY'S REPORT.—THE SCIENTIFIC RESULTS OF THE EXPEDITION.—IMPORTANT CONCLUSIONS DEDUCED FROM DATA AND OBSERVATIONS. — A REVIEW OF PREVIOUS ARCTIC EXPLORATIONS 482

THE RECEPTION AT THE ACADEMY OF NATURAL SCIENCES.—THE INVITED GUESTS 519

LIEUTENANT PEARY AND HIS COMPANIONS.

ILLUSTRATIONS.

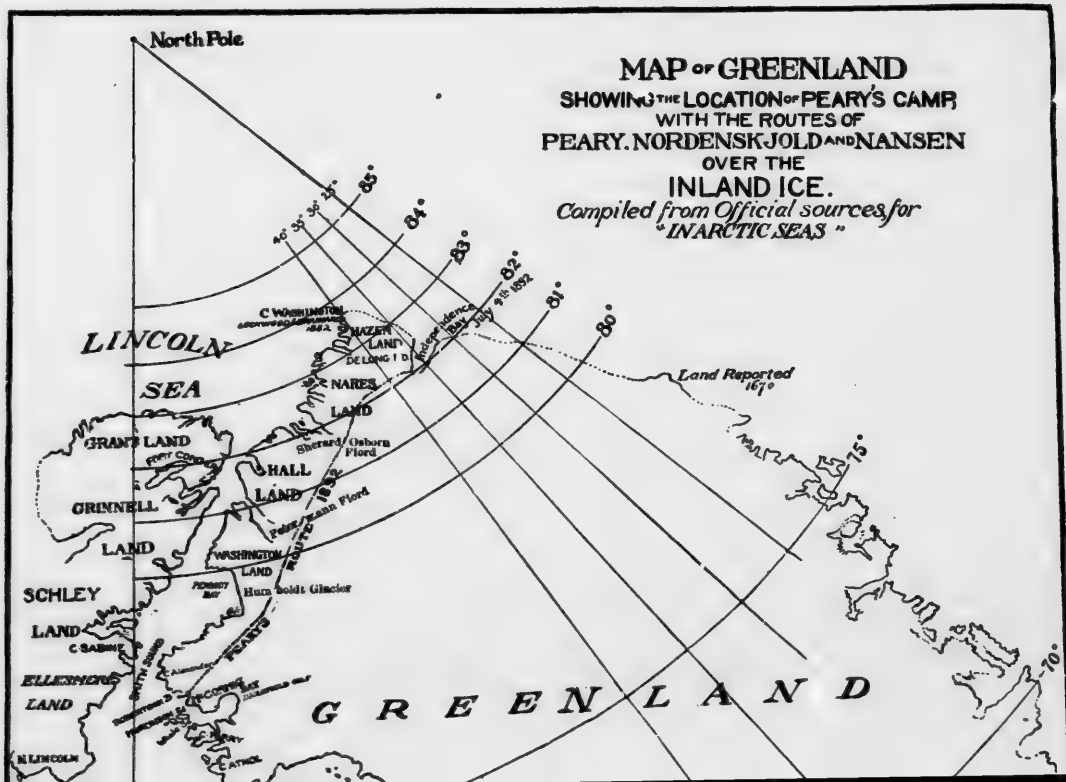
	PAGE.
The "Kite" Among the Bergs . . . . . *Frontispiece*	
Lieutenant Peary and His Companions	7
Map of Greenland, Showing the Location of Peary's Camp, with the Routes of Peary, Nordenskjold and Nansen over the Inland Ice	12
Lieut. and Mrs. Peary . . . . . opp.	19
Captain Richard Pike	24
The Members of the West Greenland Expedition . opp.	28
An Abandoned Boat	33
The Midnight Sun . . . . . opp.	42
Godhavn	45
Inspector's House, Godhavn	50
Chapel at Godhavn	52
Native Woman and Children, Godhavn	54
Young Eskimo Girls and Native Hut	56
Storehouse and Group of Natives, Godhavn	57
Blauzy Dael or Windy Valley	69
Upernavik	77
Kajak and Paddle	80
A Kajaker, Upernavik	81
Duck Islands	83
Nest of the Eider Duck	84
A Midnight Scene	87
The "Kite" in Melville Bay . . . . . opp.	94
In Arctic Attire	102
The Dead Polar Bear	105
A Great Northern Iceberg	109
The Native Camp at Whale Sound	117

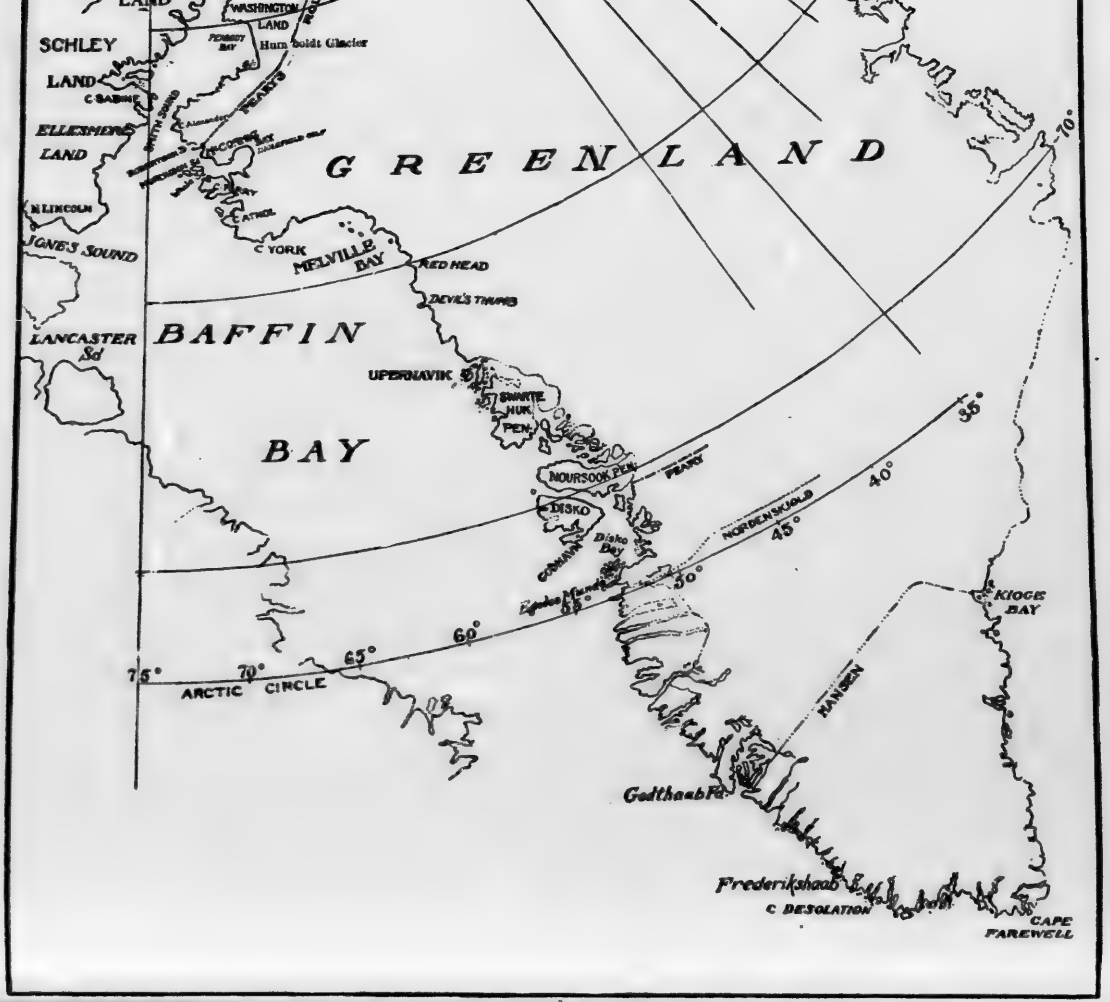
KNIFE WITH IVORY BLADE AND WOODEN HANDLE 118
IVORY PIN 118
ESKIMO KNIVES 120
LAMP MADE OF SOAPSTONE 121
AN ARCTIC BELLE 122
ESKIMO STONE DWELLINGS 128
THE PEARY NORTH GREENLAND AND WEST GREENLAND EXPEDITIONS ON A FLOE . . . . . opp. 130
LIEUT. PEARY'S CAMP, MCCORMICK BAY 133
MOUNTAINS AND TABLELAND BACK OF PEARY'S CAMP 138
SAUNDERS ISLAND . . . . . opp. 146
CAPE YORK 150
ESKIMO BONE NEEDLE 153
A GROUP OF CAPE YORK ESKIMOS 155
ESKIMO BOY 161
SLEDGE 165
NATIVE DRILL 166
KAJAK AND PADDLE, WHALE SOUND 167
BOWS 168
BOW-CASE AND QUIVER 169
ARROWS WITH BONE SHAFTS 170
ARROWS SHOWING THE SPLICING OF THE SHAFT AND A SINGLE SMALL FEATHER 170
ARROW-HEAD FROM THE HAYES EXPEDITION OF 1860 171
SPEAR OR LANCE 171
SPEAR-POINTS 172
SPEAR FOR SMALL ANIMALS 172
HARPOON OF THE MOST NORTHERN ESKIMOS 173
HARPOON-TIPS, CAPE YORK 174
ATTACKING A WALRUS . . . . . opp. 174
HARPOON OF THE DISKO NATIVES, SHOWING THE THROWING STICK 175
HARPOON-TIP, DISKO 175
AIR-BAG 176
TOYS MADE OF IVORY 178
"BUZZ SAW" OR "BULL ROARER" 179

Toy for Cup-and-Ball Game 179
Charms 180
Narwhal Horn 181
"Mickey" 183
Iceberg in Waigate Channel 194
Umiak or Woman's Boat 199
A Bit of Greenland Scenery—Disko Island 201
Signal Station—St. Johns Harbor . . . . . opp. 212
Red Cliff House—Lieut. Peary's Headquarters, McCormick Bay 221
Waiting for a Lead 229
Assistant-Governor Carstens, of Disko, in the "Fulton" 231
Hummocky Ice—The "Kite's" Furthest Point North . . 237
The "Kite" in McCormick Bay 243
Icebergs in Whale Sound 252
"Home Again"—The "Kite" at the Wharf in Philadelphia 263
Watching for Seal 270
Mittens and Fur Collar 271
Mother Carey's Chickens 276
The Separation of the Floes—"Polaris" Expedition, 1872 278
St. Johns Before the Fire 289
The First Iceberg 291
Winter in High Latitudes 294
Walrus Head 296
A Group of Seals 301
Shooting Seal 304
An Eskimo Pilot 306
Godhavn 311
Ice-sailing 316
Svarten Huk 324
Eskimos at Red Cliff House 331
A Walrus Herd 339
Catching Auk with Net 343

Stalking for Walrus 354
Planting a Guide-post on the Ice-cap 358
The Meeting with Lieut. Peary on the Inland Ice . . 361
Lieut. Peary and North Greenland Party 368
Northern Eskimos—Women and Children 369
Eskimo Sled 373
Interior of an Igloo 375
Catching Fish Through the Ice 377
Ice Floe on Inglefield Gulf 381
Eskimos' Fox-trap 385
"On the Home Stretch"—Sailing Over the Ice-cap . . 391
Face of a Greenland Glacier 401
Mr. Meehan, and Daniel, the Eskimo Interpreter . . . 403
Iceberg off Robertson Bay 411
Chart of McCormick Bay and Surroundings, Illustrating the Search for Verhoeff 413
A Walrus 421
Native Woman of Godhavn 423
A Trophy (Polar Bear) 425
Godthaab 431
An Eskimo Newspaper (Facsimile) 437
Eskimo Color Printing (Facsimile) 441
The Last Iceberg 446
Harbor of St. Johns, the Home Port of the "Kite," . 449
Dr. F. A. Cook 455
Eivard Astrup 457
Certificate of Search for Verhoeff 467
John M. Verhoeff 475
Invitation Card to the Reception Tendered Lieut. and Mrs. Peary 521

. . 354
. . 358
. . 361
. . 368
. . 369
. . 373
. . 375
. . 377
. . 381
. . 385
. . 391
. . 401
. . 403
. 411
RAT-
. . 413
. . 421
. . 423
. . 425
. . 431
. . 437
. . 441
. . 446
," . 449
. . 455
. . 457
. . 467
. . 475
AND
. . 521


North Pole
MAP OF GREENLAND
SHOWING THE LOCATION OF PEARY'S CAMP
WITH THE ROUTES OF
PEARY. NORDENSKJOLD AND NANSEN
OVER THE
INLAND ICE.
Compiled from Official sources for
"INARCTIC SEAS"
85°
84°
83°
82°
81°
80°
75°
70°
LINCOLN
SEA
HAZEN
LAND
DE LONG I S
NARES
LAND
Land Reported
167°
GRANT LAND
Sherard Osborn
Fiord
HALL
LAND
GRINNELL
LAND
WASHINGTON
LAND
SCHLEY
LAND
Humboldt Glacier
C SABINE
ELLESMERE
LAND
PEARY'S
ROUTE
GREENLAND


WASHINGTON LAND
SCHLEY LAND
Hum Solds Glacier
C SABINE
ELLESMERE LAND
G R E E N L A N D
N LINCOLN
JONES SOUND
C YORK
MELVILLE BAY
RED HEAD
DEVIL'S THUMB
LANCASTER Sd
BAFFIN BAY
UPERNAVIK
SWARTE HUK PEN.
NOURSOOK PEN
DISKO
Disko Bay
NORDENSKIOLD
KIOGE BAY
NANSEN
Godthaab Fd
Frederikshaab
C DESOLATION
CAPE FAREWELL
ARCTIC CIRCLE
70°
65°
60°
55°
50°
45°
40°
35°
75°

PART I.

THE VOYAGE OF THE KITE.

INTRODUCTION.

IN 1886, Lieutenant Robert E. Peary, of the Engineering Department of the United States Navy, having secured leave of absence, took passage on the steamer *Falcon* from St. John's, Newfoundland, to Disko, in Greenland. The *Falcon* was bound on a whaling trip to Lancaster Sound, at the head of Baffin Bay, but her captain agreed to put the lieutenant ashore at Disko and call for him on his return voyage in the fall. Lieutenant Peary desired to examine the unknown interior of Greeland, and took this means of reaching his destination. In due time he landed and made preparations for his journey. With only a single companion—a Danish officer who, when the Eskimos refused, had volunteered to accompany him—the lieutenant scaled the steep cliffs which everywhere separate the known from the unknown land in Greenland, and set his foot on the mysterious ice cap.

All Greenland, as far as it has been explored, with the exception of a strip bordering the coast, is one vast glacier. What are called glaciers on its shores are merely tongues of ice pushed out into the ocean by the great weight of a continent of ice behind it. From the extreme north to Cape Farewell is one vast sheet, the

product of centuries of snow-storms. This ice sheet is comparatively level, the inequalities of the mountains and valleys being almost entirely obliterated by the uniform coating of ice. Only the gradual rise of the land, from the level of the sea to an altitude of about six thousand feet in the interior, is preserved. Here and there, in the interior, mountain-peaks push their way through the enormous blanket of snow and ice, but except for these landmarks the surface is an almost level plain. Across this surface Lieutenant Peary made his way due east for about one hundred miles. The journey, though made under great difficulties, was without danger or extraordinary fatigue, and served to confirm him in his belief of the correctness of a theory which he had formed. This theory, in brief, was that the true way to solve the many problems which Greenland offers to geographers, and at the same time to reach the most northern point attainable by man, was to journey overland on its frozen surface, instead of attempting to work one's way northward along the shores.

It was several years after this first exploration that an opportunity offered to definitely prove his theory. In the mean time Nansen had succeeded in crossing the continent from east to west, although at a point below the Arctic Circle. The report of the condition of the interior by this explorer agreed with what was found by Peary. A comparatively smooth ice cap covered the entire breadth of Greenland, at least at that point, and there was every reason to suppose that the same condition prevailed still farther north.

It is not necessary to detail the modifications which were made of the original plan projected by Lieutenant Peary. His aim was to attain the most northern point yet reached by man. This was 83° 24′ north latitude, and was made by Lockwood and Brainard in 1882.

To do so he required several things: First, he needed to be landed at a point as far north as possible, from which an expedition could start; then he must winter in this locality, so as to take advantage of the earliest possible opportunity to start on his northward journey: he had so to arrange matters as to make such "caches" of food and provisions in the fall of the year as would obviate the necessity of carrying with him all the supplies that might be necessary for the journey; finally, he must provide some means of retreat to a civilized settlement, whence he could carry back his party, together with any records of discoveries that he might make.

To the expedition he was willing to contribute his private fortune, but more would be required. In order to prosecute his researches he needed, besides, the public support of some distinguished institution and leave of absence from the government.

Government aid was out of the question. The sad result of the Greely expedition had been too recently announced to warrant any hope of help from that quarter. The lieutenant, after several rebuffs, lectured before the American Geographical Society of New York and the Academy of Natural Sciences of Philadelphia. He enlisted the sympathy of and received such substantial support from these bodies that the expedition was finally

sent under the auspices of the last-named institution. The desired leave of absence was obtained, and friends of the lieutenant and the Academy provided the funds.

It would be difficult, if not altogether unnecessary, to explain how the original plan of Lieutenant Peary to reach his desired point and there deposit the supplies he would need was modified. Eventually it was determined to send out an exploring expedition by the Academy of Natural Sciences. This expedition was to charter a ship, carry Lieutenant Peary, his party, and such material as he deemed necessary, and land them on or about the shores of Whale Sound or Inglefield Gulf, in latitude 78° north, and there leave them. On the return voyage the Academy party, according as time and opportunity permitted, proposed to make investigations of the land and its natural history, and bring back such specimens and information as might be of value to the Academy. The supplies for the proposed inland journey and the means of returning to civilization were to be provided by the Lieutenant himself. These included a supply of provisions sufficient to last his party, after the landing had been made, for at least eighteen months, exclusive of the fresh meats which he might obtain on the voyage or at his camp. A portion of the ship's supply of coal was also left with him, and, besides this, building material sufficient to construct a small house was carried, together with two large whale-boats, fitted for dragging over the ice, rowing, and sailing, in which the retreat of the party was to be attempted in the summer of 1892. He had also a full supply of scientific instruments, snow-

itution.
friends
e funds.
ssary, to
Peary to
pplies he
termined
ademy of
charter a
ich mate-
or about
n latitude
rn voyage
pportunity
the land
specimens
Academy.
y and the
rovided by
supply of
he landing
, exclusive
the voyage
pply of coal
lding mate-
vas carried,
for dragging
the retreat
mer of 1892.
nents, snow-

MRS. JOSEPHINE DIEBITSCH PEARY.

LIEUT. ROBERT E. PEARY, U. S. N.

shoes, implements for hunting, etc., and warm clothing. He had hoped to supplement his supplies by the obtaining of Eskimo guides, dogs, and sledges at Godhavn. In this he was disappointed, as were also his expectations, to some extent, in the supply of fresh meat. Otherwise all that he desired was taken to McCormick Bay and left on its shores.

The leader of what is generally known as the Peary Expedition adopted the title of the North Greenland Expedition of 1891–92. The Academy party, therefore, distinguished itself as the West Greenland Expedition of 1891. Both expeditions were under the command of Lieutenant Peary until he left the vessel. Later, the West Greenland Expedition was in charge of Professor Angelo Heilprin. The personnel was as follows:

NORTH GREENLAND EXPEDITION OF 1891–92.

Lieutenant R. E. Peary, the commander of the North Greenland Expedition, is a native of Pennsylvania, but has long been a resident of the State of Maine. He is about forty years of age, and spare built but hardy. He occupies in the government service the position of civil engineer, being attached to the Navy Department with the rank of lieutenant.

His wife, Mrs. Josephine Diebitsch Peary, was a resident of Washington, D. C., and is a member of a well-known family of that city. She accompanied her husband on his perilous journey, and has remained over winter at the northern headquarters. She is probably the first white woman to winter in such a high latitude.

LIEUT. ROBERT E. PEARY, U. S. N.

MRS. JOSEPHINE DIEBITSCH PEARY.

Langdon Gibson, of Flushing, Long Island, is about twenty-four years of age, being tall and muscular, and acted generally as Lieutenant Peary's chief assistant.

Eivard Astrup is a Norwegian, and had only lived in the United States for a few months when he volunteered for the expedition. He is skilled in the use of the "ski," as the peculiar snow-shoes of Norway are called.

John M. Verhoeff is a native of Louisville, Kentucky, and acts as the mineralogist of the party.

Dr. F. A. Cook is the surgeon of the party, and a graduate of the College of Physicians and Surgeons of New York.

Matthew Hensen, who acted as Lieutenant Peary's servant on the latter's trip across Nicaragua, accompanied him to the North. He is an active, intelligent young colored man, and was formerly a resident of Philadelphia.

West Greenland Expedition.

Prof. Angelo Heilprin, the leader of the West Greenland Expedition, was the executive curator of the Academy of Natural Sciences. A native of Austro-Hungary, but long a resident of Philadelphia, his reputation as a geologist is world-wide. He is the author of numerous works which are accepted as standards on the subjects of geology and general natural history.

Professor Benjamin Sharp accompanied the expedition as zoologist in charge; he is the corresponding secretary of the Academy, a graduate of the University of Pennsylvania and of Wurzburg, and had made a special

study of invertebrate zoology at the Naples Zoological Station.

Professor J. F. Holt is the Professor of Natural History and Hygiene at the Central High School of Philadelphia. He accompanied the expedition as its zoologist.

Dr. William E. Hughes was the ornithologist. He was likewise a graduate of the University of Pennsylvania, and a well-known practitioner of medicine of Philadelphia.

Mr. Levi W. Mengel, the entomologist, is a resident of Reading, Pennsylvania, and is well known as a collector of lepidoptera.

Dr. William H. Burk, the botanist, was a graduate of the University of Pennsylvania, and is one of the associate editors of the Philadelphia *Public Ledger.*

Mr. Alexander C. Kenealy, a son of the celebrated member of Parliament, was detailed by the *New York Herald* to accompany the expedition as its correspondent.

Mr. Frazer Ashhurst is a member of a well-known Philadelphia family, and accompanied the expedition through a love of adventure and travel.

Dr. Robert N. Keely, Jr., the surgeon to the expedition, was a graduate of the Jefferson Medical College of Philadelphia, and had had an extensive experience in the hospitals of Paris.

The members of the expedition were comparatively young men, but all accustomed to travel. They formed a most congenial company, and lasting friendships were formed on the long voyage.

The expedition left Brooklyn, N. Y., on June 6th, on the Arctic whaling steamer *Kite*, which had been chartered for the purpose from Bowring Bros. of St. John's, Newfoundland, by the Academy of Natural Sciences, with a crew of fifteen men, including the captain. She returned to St. John's on August 23d. The Peary party had been landed at McCormick Bay, in latitude 77° 43′ north, and the members of the West Greenland Expedition returned to Philadelphia by way of Baltimore.

During the voyage the expedition had rather exceptional facilities for examining the habits and customs of the natives, especially those in the vicinity of Cape York. They belong to a most interesting race, and the facts discovered concerning them well repaid the attention thus devoted. Large numbers of curiosities, weapons, domestic utensils, and toys were brought back from these distant regions. The description in the following pages is, therefore, not merely a narrative of a voyage, but includes also some account of the natives and their customs.

THE VOYAGE OF THE "KITE."

CHAPTER I.

THE START.—CAPTAIN PIKE.—OUR CREW.—THE LAND OF EVANGELINE.—ARRIVAL AT SYDNEY.—COALING FOR THE VOYAGE.

WE were off for the Arctic regions, and looked our last on New York harbor while the crowd that always assembles on a wharf on such occasions gave hearty cheers, and countless steam-whistles added their noisy farewells. The ship that was to carry us thither was the *Kite*, an Arctic steam-whaler and sealer of two hundred and eighty tons, which, though small, was admirably fitted and designed for the purpose. She was technically known as a barkentine; that is to say, carried square sails on her foremast, while the main- and mizzen-masts were "rigged fore and aft" in schooner fashion. She was a staunch little vessel, and we soon learned to admire her seaworthiness as well as her strength. The assistant engineer, Mr. McKinley, showed us, soon after the start was made, how her bow, for six or eight feet back from the prow, was a mass of oak; how her timbers, enormous for the size of the vessel, were bolted and keyed together; how the en-

gines, though small and compact, were fully competent for the service they were to perform; told us how the propeller was of bell-metal, being deeply sunken to avoid danger from floating ice; and explained other points about her that we appreciated much more fully when the attack on the ice began.

CAPTAIN RICHARD PIKE.

Of all the ship's company, I particularly admired Captain Richard Pike. He was the most experienced ice-sailor on board. Besides having made many voy-

ages as a whaler and sealer, he had the honor to be master of the *Proteus* when it carried the unfortunate Greely expedition to its winter home at Fort Conger, in 1881, and had also carried up the expedition of Lieutenant Garlington, which attempted to relieve Greely in 1883, in the same vessel.

On that journey the *Proteus* was crushed in the ice near Cape Sabine, July 23, 1883. The voyagers never tired of having the old captain tell of this terrible adventure, nor of his really wonderful retreat to Upernavik, travelling six hundred miles, in open whale-boats, across a sea filled with icebergs and floe ice. It was often necessary, he said, to unload the boats and drag them over long stretches of rough ice for miles to reach another lead, then transport their provisions, and launch the boats again in the tortuous passages of the Melville Bay pack. This, of course, was a severe task, and too often when completed would be found of little advantage to their progress. He said that he never lost heart but once. This was after a day of severe labor, when the boats had been drawn up on an iceberg and they prepared to "camp," if camping it could be called, for a hard storm of sleet and hail was raging, and it was impossible to build any fire. As they were about to lie down to sleep on the ice there were unmistakable signs of the collapse of the iceberg. The work was all to do over again. They must load and launch the boat, and pull off in the stormy sea for a safer resting-place. This they found at last on an ice-floe, and the men, worn out by their labor, threw themselves down with scarcely any preparation and went

fast asleep at once. He himself, he added, was "too tired to sleep," and in utter misery and despair sat up, thinking of home and family, until they awoke.

On reaching Upernavik they were well treated by the Danes, and in a few weeks were homeward bound on the United States S. S. *Yantic*, which was to have accompanied the *Proteus*, but had been unable to force its way through Melville Bay.

Captain Pike was a typical Newfoundlander, and though nearly sixty years of age was as active in mind and body as many men of half his years. His face beamed with geniality and good nature, and though his whitened hair and rugged face showed marks of the hardships he had experienced as a whaler and sealer, it was yet frank, open, and intelligent, as a good old sea-captain's face ought to be. All of us reposed the utmost confidence in him, his directions and advice being strictly obeyed and followed without question by everyone, including Lieutenant Peary himself. He was a good navigator, and did his best to impart some of his knowledge to "his boys," as he affectionately called the younger members of the expedition.

It was, however, for his friendliness and patience that we admired him most. Always genial and even-tempered, whether the ship was jammed in the ice in Melville Bay or tied up to the wharf at Sydney or St. John's, whether the sea was smooth or rough, his manner toward us never changed. On deck he was the experienced Arctic seaman, ever watchful for danger, yet ever scorning peril; between decks he was a hearty, whole-souled

companion, older in years but younger in spirit than any one of us.

Edward Tracy, the chief mate, was an excellent navigator, with large experience in travel in icy seas. He was exceedingly watchful and attentive to his duties, but nevertheless found time to instruct and entertain us. Patrick Dumphy, who acted as second mate, was a sturdy ice-pilot, and steered the ship through the narrow and tortuous passages in the ice-pack with great skill and discretion.

We had two engineers, William Jardine and his assistant, Alexander McKinley. Mr. Jardine was a man of superior knowledge and large experience. At first he was somewhat reserved, but after he had become thoroughly acquainted with us showed his companionability as well as the force of his intellect. He was an excellent mechanic, as was also his assistant, Mr. McKinley, who likewise was whole-souled and genial. Their ability and skill are shown by the fact that, although the engines of the *Kite* were many years old, and repeatedly subjected, in the course of the voyage, to the most severe strains at brief intervals, from full speed ahead to full speed astern, the entire run of more than six thousand miles was made with only a single stoppage for repairs, and this only delayed us about an hour. It was to their watchful care alone that this most satisfactory result was due.

A full list of the crew was as follows: Captain, Richard Pike; chief mate, Edward Tracy; second mate, Patrick Dumphy; chief engineer, William Jardine; second

engineer, Alexander McKinley; steward, Lawrence Hackett; assistant steward, Patrick Welsh; cook, Thomas Pfeffer; seamen, Timothy Tooney, Thomas Collins, John Cumming, John Verge; firemen, Andrew Roost, Edward Crook, John Cunningham.

The voyage from Brooklyn to North Sydney was uneventful. Once in a while some one would remind us that the land we saw was historic or romantic, but we were far off shore, and even the reminder of the fact that we were passing the home of Evangeline, where,

> "In the Acadian land, on the shore of the basin of Minas,
> Distant, secluded, still, the little village of Grand Pré
> Lay in a fruitful valley,"

failed to arouse enthusiasm.

We were compelled to enter either St. John's, Newfoundland, or Sydney, on Cape Breton, to obtain a supply of coal. The latter port was selected, for several reasons. There is a small amount on the northern side of Disko Island, Greenland, but it is of poor quality and shaley, and there are no proper means of obtaining it. It was of course preferable to coal at as far northern a point as possible. This we appreciated more fully when the hold and even the between-decks of the *Kite* were filled with what was by no means an extravagant supply.

As the harbor of Sydney was entered we had our first chance to examine closely the shores of a strange country. At first flat and dull, the scenery became more and more

HUGHES. KEELY. BURK.
KENEALY. HOLT. SHARP.
MENGEL.

THE MEMBERS OF THE WEST GREENLAND EXPEDITION.

picturesque as we sailed up the harbor. Both shores are high, and the belts of stratified rocks are clear and distinct. Sandstone, limestone, and coal alternate in long, nearly horizontal layers on the opposite sides, and the green summits are fufther embellished by pretty little churches, whose spires formed a series of beacons on every projecting cliff.

The town of Sydney is divided by Spanish Bay into three distinct settlements, North Sydney, South Sydney, and Sydney Bar. These places are six or seven miles apart, and have distinct local governments and post-offices, but are usually classified together as Sydney. A little steamboat plies from one to another every half hour through the day, so communication is easy.

Our ship lay at Victoria Piers, near South Sydney, where coal is easily secured direct from the mines. Some of our party went to South Sydney, but a majority took the steamboat for North Sydney, just across the bay. Disappointed at not getting mail at the post-office, we wandered through the town, purchasing little items of supplies which had been forgotten in New York. A Salvation Army meeting in the streets attracted us somewhat, but otherwise the village was dull and uninteresting.

The next day, Friday, was entirely consumed in filling the coal-bunkers, the members of the two expeditions in the meantime enjoying themselves in various directions. Some visited the settlements, while others explored the natural history in the vicinity of Victoria Piers.

In the afternoon the water of the bay looked so pleasant and inviting and the sun was shining so brightly that six of us took a plunge, but, as might have been expected, the water was found to be icy cold, and a very short experience satisfied our longings.

CHAPTER II.

CROSSING THE GULF OF ST. LAWRENCE.—OUR FIRST ICE.—AN ABANDONED BOAT.—IN THE MIDST OF THE FLOE.—NEWFOUNDLAND FISHERMEN.—OFF FOR CAPE DESOLATION.

WE left Sydney at 8.30 P.M., June 12th, the night being clear and the water smooth. The ship had been heavily loaded with coal, having taken on one hundred and eighty tons additional, which was piled everywhere. The hold and bunkers were full, and there was also a large amount on deck, altogether making three hundred and twenty tons, sufficient, it was hoped, to take us up to the far North and return.

Steaming along the east coast of Cape Breton Island, Sydney harbor was left behind and we passed into the Gulf of St. Lawrence. The only thing we saw during the day was an American fishing-schooner which was lying at anchor. This was the last vessel sighted until the harbor of Godhavn in Greenland was reached. Toward evening the wind and waves rose and the ship pitched and rolled heavily, making many of the party seasick and the decks wet and uncomfortable. The next day the weather had moderated somewhat, but the water was still rough.

We had by this time passed the entrance of the Gulf of St. Lawrence and were approaching the western coast

of Newfoundland. As we neared the land the shore was seen to be rugged and picturesque, with patches of verdure coming to the water's edge. Many small land-birds came about the ship, and several lighted on it, but only remained a short time and then flew landward.

All that day we sailed along the Newfoundland coast with land constantly in sight. Night coming on, brought fog with it. This was so dense that it was necessary to keep the fog-whistle blowing until morning in order to warn any possible fisherman that might be cruising in the vicinity.

In the morning the weather was still foggy, and at about 7 o'clock several pieces of ice a few feet in diameter were seen floating past the ship. This caused considerable excitement, because it was the first ice seen and was strongly suggestive of future icy experiences. We had hoped to pass through the Strait of Belle Isle and into the North Atlantic unimpeded by ice, because of the favorable reports obtained at Sydney as to the strait being well open. It had been reported as navigable a couple of weeks before; but within an hour after seeing the first small piece we ran into heavy pack-ice—so heavy, indeed, that we were unable to steam through it. The thickness of the weather prevented any sight of the ice being obtained before it had barred our progress. This, our first view of what is known as floe ice, was highly impressive. It was in the form of large masses jammed tightly together, moving up and down with the waves and grinding against each other with a dull, rumbling, mournful sound, resembling surf breaking on

a lonely shore. The sight of this immense amount of ice so soon after leaving the quiet waters of Sydney Bay affected us quite markedly, and gave us some slight conception of what might be expected. A few sea-gulls flew about here and there, contributing to the weirdness of the scene. To add to the gloom, there was seen, some distance ahead, an abandoned boat. Whence it came no one knew. It was evidently a fisherman's yawl which had been cut through by the ice and cast adrift. It was a poor, useless waif in a sea of desolation, and we could not but experience a partly superstitious feeling as we passed it by. Was it a symbol of what might occur?

THE ABANDONED BOAT.

We remembered the dreadful tales we had all read of the final outcome of so many Arctic expeditions, and thought of the numbers of faithful men who had lost their lives by such an accident as had overtaken this boat. Sentiment, however, had but little enduring place in such a practical company. We steamed as near as possible to the castaway, but, finding no evidence of life, left it to its fate and again made our way toward the open water that skirted the ice-floe, hoping by so doing to find a clear channel which would enable us to pass the strait and emerge on the open sea.

The whole day was spent searching in vain for such

a channel, going backward and forward from one side of the strait to the other, but nothing was accomplished except the obtaining of views of the lonely shores of Labrador and Newfoundland. One channel, indeed, was found which appeared to lead to open water beyond, but after following it a couple of miles we found ourselves again blocked. The ice quickly closed in behind us, and we were unable to advance, our retreat was cut off, and there was but little prospect of being able to escape for several days. We were in the narrowest part of the Strait of Belle Isle, it being here but nine miles wide, and at this point the ice coming from the north becomes jammed and interferes seriously with navigation. Our journey could scarcely be said to have commenced, as we were only in the latitude of 52° north, while our ultimate destination was in the neighborhood of 78°. In other words, we had accomplished less than one-third of the distance we had designed to go, and this the easiest portion of the journey, yet we were apparently completely blockaded and with no visible prospect of release. At times the ice would open a little, when some slight advance would be made. Small clear patches of water were seen here and there, and on these were numbers of ducks. They were so tame and unaccustomed to being molested as to allow the ship to approach quite close. We shot many, and found them a desirable addition to our ordinary diet.

Later in the day the fog disappeared, and we found ourselves close to the Newfoundland shore. Here, near the edge of the water, were seen several small houses or

huts, evidently those of the native Newfoundland fishermen. A boat containing three men put off from shore, and after considerable exertion in working through the ice succeeded in coming alongside the *Kite*. They stated that many of the people were sick, and some had died. The disease appeared to be epidemic, and from what could be learned from them we judged it to be analogous to that known to us as "influenza." They said no ship had reached the settlement for many months, and that they were sadly in need of assistance. After having a long talk we gave them some medicines, and they left very grateful, taking along letters from several of the party to mail home, as a ship was expected to call in about ten days. These letters were received all right by the parties to whom they were addressed, but only after a long delay, for the strait, as we afterward learned, was closed for many weeks.

After our visitors had departed we made another desperate attempt to get the ship through the ice, but were again unsuccessful. In default of anything better to do, we resorted to fishing through the fissures or leads in the ice, and succeeded in catching a number of large codfish, which furnished a fine mess for supper and supplied us with plenty of good food for the morrow. Captain Pike assured us that we would have plenty of game and fresh meat on reaching Greenland, which of course was very encouraging information. The meat obtained at Sydney was hung up from the cross-trees, as the weather was sufficiently cold to preserve it without requiring to be stored in an ice-chest.

Having found it impossible to proceed onward, the ship was fastened to a large floe on which was a good-sized pinnacle, for the purpose of securing enough ice to replenish our water-tanks. The sailors were some time in cutting and storing large pieces which were to be melted as fresh water was required. While they were at work our party wandered over the ice, indulging in snow-balling one another and taking photographs. Several good pictures were obtained of the vessel as seen from the ice-floe, and on our return to the ship we all enjoyed a good supper of fresh codfish and potatoes. To the north and south ice was seen as far as the eye could reach; to the east was the Newfoundland coast, and on the west were the bleak shores of Labrador.

Night setting in found us still fast in the ice, with the weather getting colder, and we were glad to seek the comfortable cabin with its cheerful coal fire. The sound of the grinding and groaning ice was our lullaby that night. None of us regarded our position as serious; indeed, the captain, who was an old sailor in Arctic seas, told us that it was a usual thing up this way, and was owing to a late summer. We were all satisfied with this explanation, and only eager to escape from our imprisonment. On one of the two following days, while still in the ice-pack, some of the party visited a large iceberg about four miles away from the vessel. They returned quite tired and exhausted, as climbing over the rough ice was no easy task. They had remained away so long and the weather became so foggy that the captain grew uneasy as to their ability to find the way back. Two of the

Newfoundland sailors were just about starting in search of them when they were discerned approaching. Had the fog been a little quicker in coming up, they would probably have found it impossible to regain the ship, and would have had to remain on the ice all night. This illustrates one of the difficulties and dangers of Arctic travelling, and served to warn the less experienced of the risks incurred in wandering too far away. Later, the weather having cleared, it was found possible to force the ship a few miles further through the pack, and by working all night about thirty additional miles were made.

At this season of the year, in these latitudes, daylight begins at 2.30 A. M. and lasts until 9.30 P. M., so there was much more time to see to navigate the ship than when farther south.

A strong wind afterward springing up from the south moved the ice, and the ship with it, in the direction we wished to go. By this time we were opposite the light-house on Cape Norman, which is the north-western extremity of Newfoundland. Although surrounded by ice, and the temperature at 40 degrees Fahrenheit, it did not seem at all cold, and we were able to be out on deck in our shirt-sleeves, with no heavier clothing on than when we left home. This feeling of warmth was attributed to the reflection of the sun on the ice, and the explanation was made to appear all the more plausible by our getting much sunburnt during the time of our confinement in the ice-floe. Soon after the sun went down the air became markedly colder and the thermometer de-

scended to about or below freezing-point, making us all appreciate the comfortable quarters below decks.

The ice now became more broken and loose, and at daylight we again endeavored to force our way through the floe. A strong wind from the south having come to our aid, assisted us in our progress. By noon we had reached the southern end of Belle Isle. The light-house on the bluff ran up the British flag, which courtesy was returned. Belle Isle is situated at the northern end of the strait bearing the same name, and is a bold, rocky island one mile wide and nine miles long. The only buildings on it are two lighthouses, situated one at each extremity, north and south. There is also a building near the southern light, containing supplies to be used in case of shipwreck. The light on the upper end of the island is the most northern one on the eastern shores of the American continent, there being none in Greenland or Labrador. The former place is only accessible in the summer months, and is situated so far north that during that season there is continual daylight, and thus the necessity for a lighthouse does not exist.

The keepers of the light at Belle Isle must have looked upon us as the harbingers of summer, as the captain said that our ship was undoubtedly the first one they had seen since the previous year, navigation closing in those waters early in November. We were all anxious to go ashore to leave letters for any passing vessel that might call and take them on their way south, but were unable to venture out on account of the danger of attempting to force a small boat through the loose and

dangerous ice intervening between ourselves and the shore. This ended our hopes of sending any further communications home, unless we happened to have the good luck to encounter a ship on its way south.

As soon as the strait is known to be open this route to the river and Gulf of St. Lawrence is taken by merchant and fishing vessels, because it is the shortest between the Old World and the New. At this season of the year it is generally avoided, but on our return voyage we passed several vessels bound to the strait for cargoes of cod-fish. These are caught and dried by the fishermen, and afterward shipped to points in the West Indies, Central and South America, and Europe. Early in the season it is comparatively rare that vessels attempt to force the dangerous passages of the Strait of Belle Isle.

There was a possibility of our meeting vessels bound from the far North, but this was extremely improbable at this period of the year. Almost the only ships that traverse what is known as the Greenland Sea are whalers on their way home late in the season, and, farther north, a few from Denmark to their colonies in Greenland.

Our course was set a little west of north, heading for Cape Desolation, which is somewhat to the westward of Cape Farewell, the most southern extremity of Greenland. The passage across Greenland Sea was expected to be accomplished in from six to eight days, provided no detention was occasioned by the ice, which might be encountered at any time, and the winds were favorable. The water being clear of floe ice, we steamed at about eight knots an hour, having the wind in our favor. The look-

out was stationed at his post in the bow, watching for icebergs. Night was coming on, and as several had been seen early in the day, we feared that there might be others in our path. The night, fortunately, was clear, and the moon gave plenty of light, so that by keeping a sharp watch ahead any approaching bergs could be seen in time to avoid a collision.

With early dawn came a north-west wind which increased all day, until by nightfall it was blowing a gale. Our heavily-laden ship was still deep in the water, not enough of the coal having yet been used to lighten it to any appreciable extent. The large amount of coal on deck rendered the ship more unwieldly than it otherwise would have been, and it pitched and tossed frightfully in the large waves which every now and then broke over the sides. Everything above was cold and wet, and it was almost impossible to stay on deck with any degree of comfort or even safety. Many were again taken seasick, and sought their bunks, not, however, to enjoy much rest, the tossing of the little ship rendering that impossible.

The gale kept up all night, and Sunday found it more violent than ever. The cook's galley, a small house on deck, was nearly washed away by the sea, and so damaged as to require repairing before it was possible to obtain any cooked food. As many were seasick, we were not greatly agitated over the accident, knowing that we would not want anything from that quarter for a day or two. The gale, after continuing about three days, at last began to subside. It was remarkable that

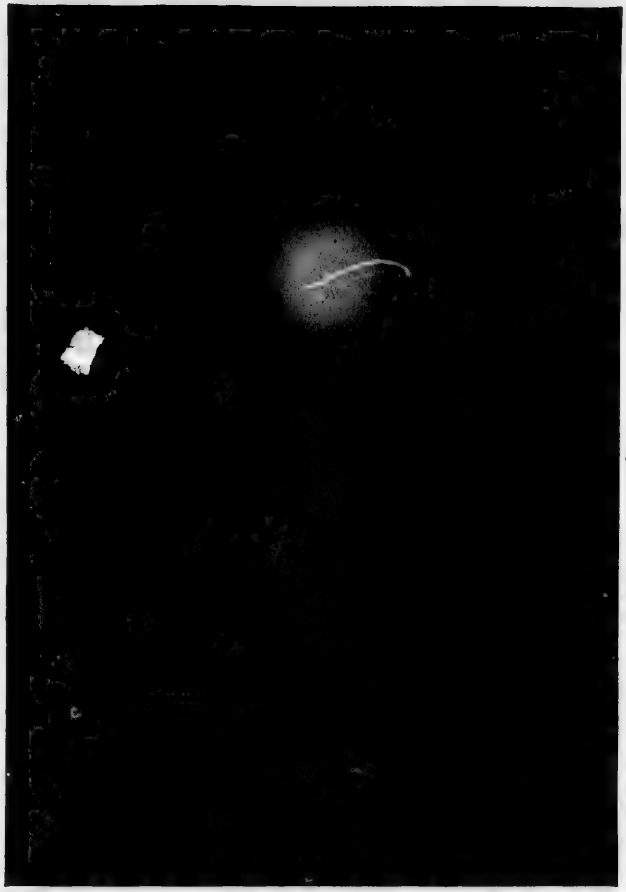
in these high latitudes, where one would expect continuous cold, as long as the sun was shining the air felt balmy. To be sure, the sun only hid himself for three hours, and a few days later we had his presence all night. Until 11 o'clock P. M. one could easily read ordinary print on deck, even at this early stage of the voyage.

CHAPTER III.

First Sight of Greenland.—Icebergs.—Disko Island.—Arrival at Godhavn.—Visit of Eskimos.—Dining with the Governor.—Native Huts.

ON June 23d, toward evening, we caught our first sight of Greenland. The land was many miles away, appearing as a narrow, dark cloud on the horizon. All through the long Arctic twilight we steamed toward it, the outline becoming more irregular, but the peaks still seeming as far off as ever. What we saw were the mountain-tops back of Cape Desolation, and at this long distance it seemed to deserve the name which it bore.

Rugged peaks, overshadowed by a cold, dead sky, were all that we could distinguish; on approaching nearer, however, we had our first glimpse of how beautiful an Arctic scene might be. A vast mass of icebergs of fantastic forms, many of which might be compared to church-spires or ruined castles covered with snow, were encountered. Their varied forms pleased us, and we remained on deck until late in the evening admiring them; but the most beautiful sight was one that presented itself later, when the moon rose and illumined with her silver light their snow-clad cliffs. As we passed them one after another, they loomed up, inky black, against the twilight sky, and had a weird fascination which kept us on deck for many hours.



THE MIDNIGHT SUN.

These icebergs, as Captain Pike informed us, were fragments of glaciers on the eastern shore of Greenland, which, swept around Cape Farewell by the ocean currents, sail slowly up the western coast until deflected by the great Arctic currents, and are carried down the east coast of North America to the open Atlantic. Only the largest and oldest of these bergs survive their long journey; the rest are melted and dissipated by the warm water and air which they meet as they float southward. Those that remain are the terror of the transatlantic seamen, for they float in the direct course of the shortest possible route between the great points of departure of the two continents. When these fragments of the great ice-fleet are met with, the mighty steamer is in great peril, and the captain shows his sense of her danger by his constant watchfulness and extreme care; but the *Kite* being of different build, Captain Pike's placidity was not even disturbed for a moment by the sight of these monsters. Notwithstanding the abundance of icebergs which lay in our path, the ship kept on her course, except that the ice-pilot would occasionally throw over her helm to avoid what he called "knocking her toothpick out of her mouth"—that is to say, losing her jibboom.

The great procession of bergs continued all night, but as the ship reached the desired point opposite Cape Desolation, and her course was turned northward, they were gradually left behind and sailed majestically on their journey.

After passing Cape Desolation we had beautiful, warm,

sunshiny weather, allowing us to be on deck all the time. The days were very agreeable, and, having now crossed the Arctic Circle, we were favored with continuous daylight. This enabled us to see all that was passing at any time; but having no darkness affected us strangely, producing such a feeling of wakefulness that it was hard to tell when we ought to go to sleep.

At this time we were passing along the western coast of Greenland, which was only twenty miles distant, its rugged outlines being clearly visible in the brilliant sunshine, while the tops of its snow-clad mountains were distinctly outlined against the blue sky in the distance. The immense icebergs which were constantly passing always interested us. Their ever-changing forms and beautiful clear blue color were never-ceasing objects of comment, and constantly challenged our admiration. The continuous daylight and radiance of the sun, together with the magnificence of the bergs and the anticipation of still more wonderful revelations, so aroused us that it destroyed all desire for sleep, and made us feel as if we were on a summer pleasure trip at home, rather than steaming amidst the ice of Arctic seas. The island of Disko was sighted on June 25th, in the afternoon, and although seventy miles distant, it was nevertheless, owing to the clearness of the atmosphere, distinctly visible to the unaided eye.

On this island is situated Godhavn, the principal settlement of Northern Danish Greenland. This settlement is on the south side of the island of Disko, in latitude 69° 17′. It is about half a mile from the sea, and

to get a good anchorage it is necessary to enter the fiord or bay for this distance. The settlement is not visible from the ocean, being hidden by the mountains at the

GODHAVN.

entrance of the fiord; indeed, were it not for the two stone beacons placed to mark the spot, one would have been liable to have passed it by unrecognized. Godhavn was the first place at which we called after leaving Sydney. The scene at the mouth of the harbor was truly magnificent, three large icebergs seeming to guard its entrance; one, about three hundred feet in length and a hundred and fifty feet in height, was shaped like an immense arch,

with an opening large enough to permit the passage of a vessel the size of our own with topmasts housed. From the level of the sea to the top of the arch was quite seventy feet, and it was as regular and beautiful a semicircle as ever seen in our large stone bridges at home. The pale blue ice, with its surface covered with snow and frozen hard enough to glisten in the morning sunlight, surpassed in color and beauty anything that man could form from purest marble, and was a sight never to be forgotten.

On our arrival in front of the town a whale-boat left the shore, manned by half a dozen natives, who, coming aboard, guided our ship to a safe anchorage opposite the governor's house. Some of these men spoke a little English, which had been acquired during the visits of whalers. By means of their small stock of this language, eked out with additional signs and gestures, they informed us that our vessel had been sighted several hours before, by some of their companions, from the mountain height adjacent to the village.

The harbor of Godhavn is land-locked, and is as snug and pretty a little harbor as one ever sees. On the north side the mountains reached over three thousand feet in height, their tops being covered with snow and ice. Toward the base they were greenish in color, which was due to a scanty growth of mosses and lichens. There was not a tree to be seen anywhere; indeed, we soon learned that in Greenland trees as we know them do not exist. To the south the ground was low and rocky, and in the water beyond a number of icebergs could be seen.

The land contained enough soil to furnish subsistence to a small amount of vegetation, which added a pretty green to the landscape.

The anchor was dropped and a salute fired, which was responded to by one from the land, and Captain Pike with Lieutenant Peary and Prof. Heilprin went ashore and called on the inspector, Mr. Andersen. The letter of introduction from the Danish minister at Washington, together with other papers explaining our mission in Greenland, was shown to him, and he received the visitors very pleasantly, hoping that their stay at Godhavn would be an enjoyable one.

After their return to the ship nearly all the party landed and proceeded to investigate the village and surrounding country. The few remaining on board received a visit from the natives, who came to the ship to trade and gratify their curiosity. They proved so interesting that I decided to stay aboard all morning.

The first sight of the Eskimo is disappointing. It is true that they are squat in figure and swarthy, but those which we saw at Disko were not so remarkable in face or form as to have attracted attention in any port where foreign sailors abound, except for their skin costumes. Even these costumes would not have been particularly noticeable had it not been for their filthiness. We felt the same disappointment that many of us had experienced at seeing the Western Indians, when, instead of a noble savage, or even a semblance of the caricatures one sees of the Indian in high hat and red blanket, we found men like ourselves, dressed in fairly civilized fashion, and at

first sight not remarkable for anything. This first impression, however, in both cases soon wears off. The physiognomy, race characteristics, and customs are seen to differ widely from those of other nations, and an interest all the more intense on account of its previous absence was felt in studying this (to us) new variety of mankind.

About noon a couple of natives rowed me ashore, and after a few minutes spent in looking about the settlement I met the inspector, the governor, and a passenger from the only ship in the harbor, a small Danish brig. This gentleman, Mr. Koch by name, had arrived a few days previously from Denmark, and was awaiting an opportunity to proceed southward to take charge of one of the other settlements. They were standing in front of the governor's house, talking, as I approached and introduced myself. Fortunately for me, they all spoke some English, and we were soon conversing about the expedition.

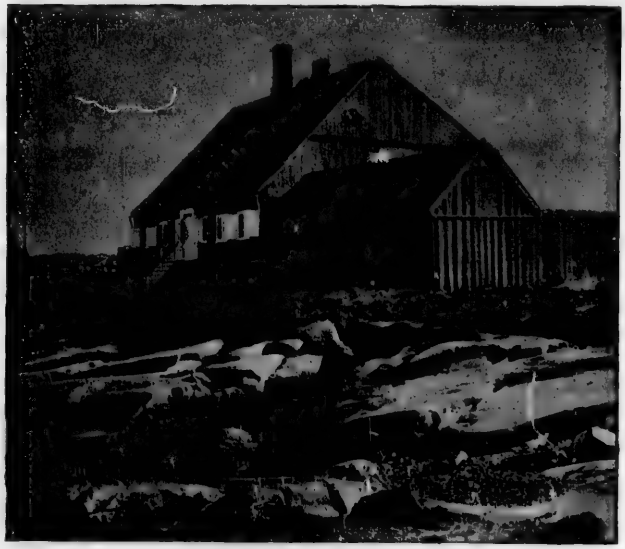
A delightful half hour was thus passed, after which I received an invitation from the governor to dine with him. On my accepting, we entered the house and were ushered into the parlor, through the open doorway of which, leading to the dining-room, could be seen the servants preparing the meal. The savory odors of the food, the spotless linen table-cloth, and home-like surroundings were indeed an agreeable change from ship-life. The party at dinner, which was soon announced, consisted of the governor and his wife, Mr. Koch with his wife and child, and myself. Then followed a most

enjoyable meal. It began with a soup of most delicious flavor, made from the eider-duck, followed by broiled eider-duck breasts and potatoes, with bread and wine. A dessert of jelly and almonds ended the repast. The variety of the vegetables was necessarily restricted, because they had all to be brought from Denmark, and communication with that country is only possible during the summer months.

The servants seemed to be quite familiar with their duties, and moved about noiselessly in their soft skin boots. A slight look or gesture from the host or hostess was readily understood and immediately obeyed. They were Eskimo women, and dressed in fur trousers with fancy-colored soft leather boots which reached to the knees; a short jacket made of the skin of the hair seal and a fancy handkerchief or cloth about the head completed their attire. It was indeed a sensible costume, and both becoming and picturesque.

The conversation at the table, which was principally in the Danish tongue, was kindly translated for me, from time to time, by Mr. Koch, who spoke English with considerable fluency. This courtesy, and the kindness and geniality of the host, added considerably to the pleasure of the occasion. On rising, at the conclusion of the dinner, those at the table shook hands with their host and with one another, and exchanged greetings. This was an ancient Danish custom, and is generally practised among the Danes in Greenland. The gentlemen then retired to another room, where coffee and cigars were served.

On leaving, soon afterward, we made a tour of the settlement. It consisted of the inspector's house, the governor's house, a store, the assistant governor's house, a small chapel, a cooper and blacksmith shop, a store-house near the edge of the water, where the ships unloaded, and about thirty or forty Eskimo huts. All



INSPECTOR'S HOUSE, GODHAVN.

the buildings except those of the Eskimos were made of lumber brought from Denmark. They were about a story and a half high, with steep peaked roofs covered with pitch. The windows, and the panes also, were quite small, both the windows and the doors being deeply cased to provide against the bitter cold of winter. At

this season of the year the double windows were unnecessary, for the temperature was about the freezing-point and in the bright sunlight it was quite warm. Both the sides and roofs of the houses were covered with coal-tar, and the casings and window-sashes were painted white, the contrast of the two colors producing a striking and by no means unpleasing effect. All were scrupulously clean, and presented a neat and cosy appearance. Several houses were fenced in, and nicely-kept pebble walks led up to the front door.

As one entered, he found a short hall from which two doors opened; one of these led into a sitting-room, which was also fitted up for the transaction of business relating to the colony. This room was quite cheerful and neatly furnished, containing a piano, a book-case filled with books, and other evidences of refinement. There were windows on three sides of the room, which looked out on the bay and the pleasant landscape around. The other door, on the opposite side of the hall, gave access to the living-rooms of the family. I did not see the upper rooms, which must have been small, and were possibly used for storage purposes or for the accommodation of the servants.

On the sheltered side of the house, under one of the windows, was a miniature garden five or six feet square. It contained lettuce, peas, and one or two other hardy vegetables. This garden was more a thing of ornament than service, as the amount grown in it was insignificant and the short season prevented the plants from becoming properly matured. It was inclosed by a neat and pretty

166503

fence of wood, which resembled the toy fences used to surround our Christmas trees.

The houses have no cellars, being built on the solid rock or on ground which is frozen perpetually from a few inches below the surface, the sun during the summer months thawing the ground to the depth of only half a foot or more, depending on its situation. There were but three of these wooden dwelling-houses, the inspector's, the governor's, and assistant governor's.

CHAPEL AT GODHAVN.

The chapel and storehouses, built also of wood, were painted black with white windows, similar to the dwellings.

The chapel was situated on the top of a hill in the rear of the village. While not large, it was nevertheless

attractive-looking, and resembled in general the small Lutheran churches of Northern Europe. It possessed a single room with wooden benches, and was used for both church and school purposes. In the front was a rather elaborate altar, also used as the schoolmaster's desk. An organ and a blackboard completed the furnishing of the interior, with the exception of a number of gaily-colored religious prints on the walls.

The storehouses were nothing more than large barns, strongly constructed to withstand the storms of winter.

The Eskimo dwellings were huts built of turf, with a roof made of boards covered with the same material. They were about fifteen feet square, and usually built on the slope of a hill. Each house contained a single window with a sash of glass composed of several panes. They were entered by a tunnel about ten feet in length and two or three feet in height, running out from its side. Before entering, it is quite essential to call to some of the inmates, who then knock out two or three of the ugly-looking dogs which congregate in and about the openings of all the huts. After this precaution one goes down on hands and knees and crawls through the tunnel, a small door giving admission to the hut. The interior consists of but one room, half of which has a floor of wood raised a couple of feet above the ground. On this the inmates spend most of their time, eating, sleeping, and working. The rest of the room is given up to cooking, curing of skins, and the storage of hunting and other implements. The raised floor is necessary to utilize the heat and warmth of the room, which

is greater nearer the roof. The height inside the hut from the ground to the roof is hardly seven feet, it being impossible for any except the smaller inmates to stand upright when on the platform.

There is a very perceptible odor of fish and grease about the inside, and generally a pot of fish and blubber

NATIVE WOMAN AND CHILDREN, GODHAVN.

is boiling over a smoky fire. The fuel used is seal oil and turf, the latter of which I saw them piling up outside the hut for future use. The Danish government provides the natives of the settlement with large cast-iron stoves, and each hut contains one of these, the pipe from which pierces the roof. The walls are usually hung

with hunting implements, clothes, occasionally some cheap prints, and a few other articles. On the platform were the skins on which the inmates slept: they were mostly those of the reindeer and birds sewn together. When not in use these furs are usually rolled up and packed away with a miscellaneous collection of unfinished clothing, little boxes containing sewing implements, trinkets, and children's playthings. The whole platform was sometimes littered with these things, for here the work of the household was done and the little children played. Many of the huts were filthy in the extreme, though in those of some of the better class of natives the platform was quite neat.

The floor itself was always strewn with fragments of skin, pieces of dirty blankets, and other offensive matter, which amply accounted for the vile odors encountered on entering.

The total number of inhabitants in Godhavn was about one hundred and fifty; of these about a half dozen were the Danish officials and their families, the rest being Eskimos.

The inmates of the native huts numbered usually six to eight in each. They seemed to have a number of children, who were as a rule bright and interesting. Almost all of the natives were of the color of our North American Indians, but the face is broader and has none of the fierce and stolid look of the American savage. They are much smaller in stature, their hair is jet black, straight, and, in the case of the men, not allowed to grow over four or five inches in length. In the women, how-

ever, it is much longer, and evidently receives considerable attention.

The married women are distinguished from those who are single by having their hair twisted in the form of a roll, four or five inches in height, on the top of the head and tightly wrapped with cord. The single women dress their hair in various styles as fancy dictates, the

YOUNG ESKIMO GIRLS AND NATIVE HUT.

female children wearing it sometimes like that of their mothers, as shown in the illustration.

I saw not a single slovenly-looking woman, and if they had not such an abominable odor of grease and rank fish oil about them they might have been quite attractive. They were able to obtain from the store in the settle-

ment fancy-colored cloths, beads, etc., and with these they made and decorated their picturesque fur costumes.

The men are neither so well dressed nor thrifty looking, much of their clothing being composed of the cast-off garments of sailors. Many of them wore pantaloons of

STOREHOUSE AND GROUP OF NATIVES, GODHAVN.

seal-skin, skin boots, and, at this season, a combined hood and shirt called "neitsek," made of a rather heavy calico sort of material supplied by the government. They were quite anxious to trade anything they had for cloth pantaloons, but as they desired only those which were in good

condition, we had very few to spare. They wished to have them for two reasons: first, to satisfy a desire to imitate the European method of dress; and second, as being a more comfortable article of clothing for summer use than their own seal garments.

CHAPTER IV.

A Native Dance.—Polaris Henrick.—Religion of the Esquimos.—Mode of Government.—Mosquitoes.—A Plunge in the Arctic Ocean.—The Native Appetite.

ON the following day I was fortunate enough to meet Mr. Carstens, the assistant governor. He had been busy, previously, supervising the unloading of supplies from the Danish brig in the harbor, but the day being Sunday, all work in the settlement was suspended, and he was therefore at leisure. Most of us went ashore to see a native dance which took place in one of the storehouses. This dance it is customary to have during the stay of the Danish ship in port, the petty officers and crew also taking part in the festivities, which constitute one of the inducements held out to them to visit these out-of-the-way shores. I was told that the Danish government had considerable difficulty in getting desirable crews for this trade, and so allows a dance and Sunday ashore to the men, to vary the monotony of their long and dangerous voyage to and from Denmark. The ships are quite small, generally brigs or barks, and are rarely manned by over ten men; there were about this number of sailors present at the dance, and they seemed to enjoy themselves hugely. Everything was quite orderly, and the good behavior of all was much commented on by us.

Several of our sailors also took part, greatly to their delight, and some of the members of our own party did not refrain from joining in the more familiar dances, which consisted principally of a mixture of hornpipes, jigs, and quadrilles, evidently learned from the sailors of whaling ships that had been calling here for years. Most of the dances included the clapping of hands and stamping of feet, not unlike our Indian war-dances. The music was made by two old Eskimos with fiddles, and it was very evident that this accomplishment originated from the same source, as three or four of the tunes played were a medley of Negro and Irish tunes that were familiar at home. I sent to the ship for a guitar, and accompanied this "orchestra" for some time. They played quite well both as regards time and tune, and I had not much difficulty in keeping with them. The natives seemed quite pleased with this addition to their music, and looked much and curiously at the guitar. It was evidently the first one ever seen in the locality, and produced quite a sensation. The natives were found extremely fond of music.

Mr. Carstens, who was so kind and courteous during our short acquaintance, gave me a large amount of valuable information about this peculiar and interesting people. During his residence of over four years he had acquired considerable knowledge of the subject, which, with the information he had obtained from other sources, made him a most charming and interesting companion.

He informed me that the natives were looked after by the Danish government. They are well-behaved, hon-

est, and spend their time in the spring catching seals and walrus and obtaining skins, ivory, and oil, which are sent to Denmark. They receive their pay in a special kind of money, consisting of coins and scrip made for this purpose in Denmark. It is taken in payment at the store for goods sold to the natives.

Inspector Andersen pointed out to us a lad about eighteen years of age as being the son of Hans Henrick, the Eskimo hunter, guide, and companion of Kane and Hayes, and mentioned so often by them in their famous books on Arctic travel and hardships. The young fellow is now an orphan, and lives with his step-mother. His smiling face and cheerful disposition show that he is evidently contented with his lot. He enjoys the distinguished name of Polaris Henrick, having been called after the United States steamship *Polaris*, which during Hall's expedition, in the year 1872, was crushed in the ice.

The boy was interesting from the fact of his having been born on an ice-floe at a time when the *Polaris* was firmly locked in the ice, in latitude 78° 30′, and in imminent danger of being crushed. Fearing the destruction of the vessel at any moment, some of the crew had encamped on the ice a short distance away, while the rest remained on board. A violent gale broke up the ice, and the floe on which the encampment was situated floated away. Those who were on the ice comprised Captain Tyson the ice-pilot, a few of the crew, and the Eskimos who had accompanied Hall's expedition. The immense floe, with its living burden, drifted about on

the open sea for six months, when the survivors were rescued by the steamship *Tigress*, in latitude 53° 35′, off the coast of Labrador, having successfully made the remarkable drift of nearly fifteen hundred miles and lived through the rigors of an Arctic winter.

The religion of the Eskimos, as was learned from Mr. Carstens, is somewhat indefinite and uncertain. At the settlements, where the Danish missionaries have labored with the natives for many years, they might be called theoretical Christians. They do not appear to be able to grasp the idea of a Deity as commonly understood, and have even a slighter conception of original sin. They cannot be made to comprehend how the sins of their fathers for generations can in any way affect them, and it is very doubtful if they have any exalted opinion of the superiority of the Christian Church over their own vague ideas of a future life. A total indifference is felt to the existence of hell as a possible future dwelling-place. This may be partially due to having passed their existence in such an utterly desolate land that they cannot imagine an abode more miserable. The sun, moon, and Great Spirit they regard as having an indefinite something to do with their past, present, and future state. At Gedesmunde and Jakobshavn, two settlements below Godhavn, are two holes or sacred caves, into which the Eskimos, on passing in the course of their hunting trips, throw bits of blubber and meat. This is about the only sacrifice they are known to offer up to the Great Spirit. Mr. Carstens thinks that their apparent devotion and regularity in attendance at the little chapel is due

largely to their great passion for music. They never tire of the music of the small organ, and singing to its accompaniment affords them the greatest pleasure.

The Eskimos are a peaceful, harmless people among themselves and toward the whites. No authenticated case of a white man being killed by an Eskimo has ever been known in Greenland, and but three cases of murder amongst the natives themselves have occurred in the history of the settlement at Godhavn. The perpetrator of one, a case of infanticide, was punished with the administration by the inspector of forty lashes on the bare back. The second case, if it can be classed as a murder, was of a somewhat peculiar nature: In one of the families there was a young girl, who, being insane and a burden to her people, was sentenced at a family conclave to death. Some carbolic acid, which had been left for dressing a wound by the doctor who visited Godhavn twice a year from some of the southern settlements, was given to her, but then, as the narrator said, "she became crazier than ever;" thereupon a second dose of a larger amount of the drug was administered, and she fell insensible. Supposing her dead, she was taken by her relatives and hurriedly buried beneath a pile of stones. They maintained that she was really dead when buried, but information imparted by others made it look as though this had not been the case, and that she was alive when interred. Owing to the doubts in the case, no punishment was inflicted in this instance. The last murder was that perpetrated by a man who was seen, in his kajak, to approach a large skin boat or "umiak"

containing nine persons. He deliberately plunged his knife into it, sinking the boat and drowning the entire party. The murderer escaped punishment, as the natives refused to act in the matter and the three Danish officials had not the courage to act themselves as his executioners. The murderer is still occasionally seen near the settlement, but is prohibited by the governor from living in it. When asked what their home government had to say about it, their reply was, "Nothing." To send the fellow three thousand miles to Denmark to be executed was nonsense, while to make executioners of the two white men here (the inspector often being absent) would be an unreasonable procedure in view of the indifference shown in the matter by the natives themselves. So the discussion closed by an invitation to any of our party who so wished, to add his carcass to their collection if they desired a specimen of that nature—an invitation which, I need hardly say, was not accepted.

The natives themselves are allowed to settle the disputes and difficulties arising among them: these are but few in number and only of a most trivial nature, the community being as quiet and orderly a one as can be found anywhere. The ordinary disputes are those arising in the division of the spoils of the chase or some domestic matters, and are punished by depriving the offender of a part or all of his share. If the offense is serious enough, his effects may even be taken away from him and divided amongst the injured parties. Sometimes the governor takes cognizance of an offence by

depriving the culprit of his supplies from the government store.

The natives have the greatest respect and affection for the Danish officials. The strength of this attachment is shown by the following occurrence: Some years ago an inspector and native, on going over the ice to a distant settlement, became separated from the shore by the formation of a crack or seam. The native was able to jump across the fissure, but the inspector, being a much heavier man and unused to such feats, found it impossible to follow. The native was unwilling to leave him and proceed to the settlement for assistance unless the inspector furnished him with a note stating the nature of the accident, and thus relieve him of blame. This the inspector refused to do, and the native remained with him, determined to share his fate. Fortunately, the next day the ice came together and enabled both to proceed on their journey in safety.

Many of the Eskimos in Danish Greenland show unmistakable signs of admixture with the white race. The resemblance of many of them to Europeans both in color and physiognomy was quite marked, being due to the intermarriage of the natives and Danes practised in the early history of the settlements. This was encouraged at that time by the Danish government, with the idea of civilizing the inhabitants and improving their condition, thus making them a more desirable class of colonists. The result of the experiment was, however, far from satisfactory, and they were forced to abandon it long ago. Instead of the half-breeds being better than the pure

natives, I was informed that they retained all the objectionable characteristics of the Eskimos plus the vices and bad habits which the Danes themselves had imported. So injurious were the effects found to be that, some time later, the Danish government negotiated treaties with foreign nations, having the especial object of protecting the natives by preventing all intercourse between them and visitors to their shores except under the strictest precautions and after a special permission had been obtained from the home government. A copy of the law on this subject, now in force, was handed to us by the governor of Upernavik. Its contents are given under the description of our visit to that place.

It has been found almost impossible to civilize or elevate the native population to any marked extent. The white inhabitants are too few in number to exert any great modifying influence. If they arrive in the settlement after having grown to adult age in a more civilized country, then, of course, they retain their accustomed manners and mode of life; but if a child is born to any of the Danish residents in Greenland, they do not dare allow it to grow to maturity in the country of its birth, but soon transport it to a more civilized community. It so happened that just before our last visit to Godhavn, on our way home, one of the Danish officials of the place had had a son born to him. While exhibiting great delight at this addition to his family, he at the same time expressed great regret that it would be with him but a short time. He stated that the children who were born of Danish parents and reared in Greenland invariably

acquired the mode of life and habits of the natives. Their nurses and playmates are necessarily Eskimos, and, even when sent to Denmark at quite an early age to be raised and educated, it is difficult to eradicate the traits acquired from their Eskimo associates. This is indeed a sad feature of the life of the few whites in these far-away regions. The parents have to face the terrible alternatives of either seeing their children growing up ignorant and uncultured at home, or of parting with them in a short time and confiding them to the care of strangers in a more enlightened community thousands of miles away. The Danish officials in these settlements are cultured, intelligent men, and their greatest pleasure is of necessity their domestic life. The self-denial that it requires of them to send their children away to be raised can only be appreciated by those who have seen and felt the utter loneliness that pervades this desolate land. As a reward of their devotion, however, after serving a term of years in Greenland they may return to Denmark, and then receive a more desirable position in their country's service at home.

Godhavn is situated on a peninsula which was formerly an island on the southern coast of the island of Disko. This peninsula is joined to the mainland by an almost level stretch of sandy beach. Crossing this, the first object in sight is the graveyard where the Christian Eskimos lie buried. The rude wooden crosses and well-kept mounds made it look like a village cemetery at home. Many of the graves had wreaths of immortelles and little offerings upon them, and all showed the care

and attention which was devoted by the living to these resting-places of the dead. A simple wooden cross marked the head of each grave, and in this country, where wood is so valuable, this sacrifice represents a large amount of self-denial in order to keep alive the memory of the dead. Two graves interested us. One was marked by a grave-stone of white marble elaborately carved and evidently from Denmark. It marked the grave of Sophus Theodore Krarup Smith, formerly inspector of the settlement. The letters were deeply engraved in the stone and gilded, and a wreath of native flowers hanging about the arms of the cross showed that in the hearts of some at least their former ruler was not forgotten. The other grave was certainly that of an Englishman; a small cross bore the name David Hume, though who he was and whether or not he was a member of any Arctic exploring party we were unable to ascertain.

Just back of the cemetery rose a basaltic ridge forming a sort of retaining-wall to the great cliff which towered two thousand feet or more into the air. It ended on a level plateau, eternally snow-crowned and forming an inland ice cap exactly similar to that of the mainland of Greenland. Several of the party ascended the mountains under the guidance of Lieutenant Peary, who had lived at Godhavn several weeks on his former trip to Greenland. They described the climb as rough, but not excessively difficult, and the views from the mountain-top as indescribably magnificent. At their feet lay the peninsula and town of Godhavn, with Disko Bay

BLAUZY DAEL, OR WINDY VALLEY.

and Baffin Bay beyond. Both were dotted with great and little icebergs shining like silver in the sunlight. The ice cap was found almost as level as a floor.

Another party explored the valley of a river called on the map the Red River, which runs into Disko Bay about a mile west of Godhavn. It deserved its name, for the red mud which it carried down from the sandstone cliffs above gave it a decidedly reddish hue. It occupied what had anciently been a glacier's bed, and the beautiful valley (called Blauzy Dael, or Windy Valley) showed every mark of former glacier action. Protected by towering cliffs, it was, at the season we visited it, a perfect flower-garden of wild plants. Yellow poppies nodded on every side, while many other flowers, blue, red, and white, were found everywhere. The ground was carpeted with moss and a few grasses, while the apologies for trees spread their twisted limbs close to the ground wherever the roots could find a foothold. As the valley was ascended the view became magnificent, for the river ran through a narrow gorge at places more than a hundred feet in depth, and all around were towering mountains from which icy streams ran and dashed in foaming cascades over the cliffs into the water below. Looking backward, Disko Bay was seen, studded with icebergs, some huge in size, some only floating blocks of ice. The air was balmy, and the water of the bay lay calm and tranquil under the bright sun, and all was as pleasant as a spring day in our own country. Birds and insects flew about us; among them were the snow bunting and several pretty little butterflies of various hues. Altogether, it

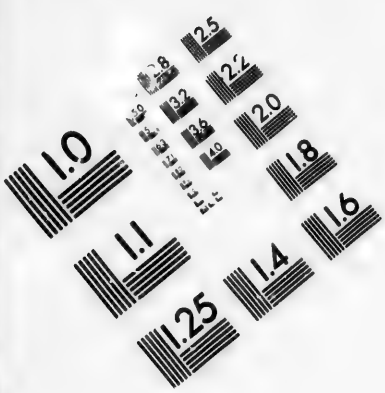
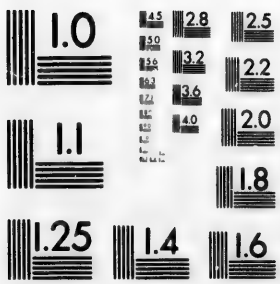
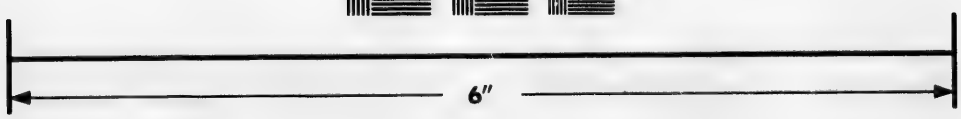
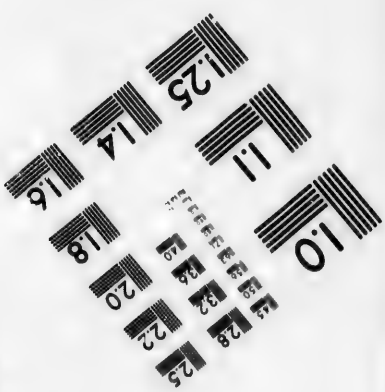


IMAGE EVALUATION TEST TARGET (MT-3)







Photographic Sciences Corporation

23 WEST MAIN STREET
WEBSTER, N.Y. 14580
(716) 872-4503

was hard to realize that one was so deep in the land of the midnight sun.

We had another reminder of home in the shape of mosquitoes, which flew about us in clouds whenever we reached the lower levels. They were hardly as venomous as our New Jersey product, but at times were very persistent and annoying. The only things that failed to remind us of a land nearer home were the absence of upright trees and the presence of the icebergs. The trees, so called, were mere bushes, perfectly flattened to the ground, and sending up a few shoots six or eight inches high, but with leaves and flowers exactly like those of our own willows. They often formed convenient cushions when we wished to rest.

After we had returned to the ship Mr. Verhoeff declared that the water looked so pleasant that he would swim from the ship to the shore and back again. Those who heard the assertion attempted to dissuade him, pointing to the numerous icebergs which floated about in every direction. Even when he stripped we all thought that a single plunge would serve to make him change his mind. Meanwhile a crowd of curious natives had gathered around, and were gazing at him in mild astonishment. Finally he took the plunge, and at once started swimming vigorously for the shore. Alarmed for his safety, and fearing that a cramp might overtake him, I jumped into Mr. Carsten's little boat, which was moored alongside the ship, and followed him, being prepared to render assistance if it was needed. He reached the shore in safety, however, and, turning resolutely around, swam

back to the vessel, a distance of about two hundred yards. He received, of course, an ovation, but was almost at once taken with a chill which at one time looked serious. A vigorous rubbing restored his circulation to its normal condition, and a brief rest made him as well as ever. It was regarded, however, as a foolhardy feat, and one which none were anxious to emulate. The effect on the natives of the sight of a swimming man was most curious. They regarded him with constantly growing astonishment. In Greenland the only use they know for water is for drinking purposes. Probably many of them had accidentally fallen into the water, but they dread and hate its effects as much as does a cat. They know nothing of the art of swimming.

During the stay of our ship at this place the natives were constantly coming and going aboard of it, and we were told that during the time a vessel is lying at anchor in the harbor they sleep but little. Midnight being as bright as mid-day, and having no knowledge of time or clocks, they did not seem to understand that the rest of us needed some repose. They appeared to have no regular time for sleep.

Notwithstanding the freedom allowed the visitors, we did not miss anything, and they were permitted to roam about at pleasure.

Their favorite resort was the cook's galley. Here they eagerly sought any remains of food or refuse he was pleased to give them, and devoured it greedily. Their capacity was simply enormous. To test it the experiment was made on a veteran who had established for

himself a reputation for gormandizing which was "founded on a rock." It was said that he and his wife, having killed a seal at some distance from the settlement, sat down on a rock and proceeded to devour the animal. A large proportion was consumed, and they ate until they were so engorged as to be unable for a day or two to start back to the settlement. We took this interesting individual down into the cabin, and, after the party had finished their meal, began feeding him on the remains. Salt beef, bread, potatoes, coffee, vegetables, and everything edible disappeared down his throat with startling rapidity. He ate, and ate, and ate, until, after having consumed more than enough for four or five men, and still showing no signs of being satisfied, he was requested to stop and escorted up again on deck. After witnessing his performance none of us had any doubt as to the truth of the story concerning his gastronomic operations on the seal, as just detailed.

CHAPTER V.

FAREWELL TO GODHAVN.—ARRIVAL AT UPERNAVIK.—NOTICE TO MARINERS IN THE DAVIS STRAITS.—THE SETTLEMENT AND ITS INHABITANTS.—DUCK ISLANDS.

ON Monday, June 29th, we had intended leaving Godhavn early in the morning, but the weather being thick and misty, we could not get out of the harbor until the fog lifted, which occurred about noon-time. Mr. Koch, his wife, and little daughter arrived on the ship a few minutes before sailing-time, to say good-bye. Mr. Carstens also came to bid us farewell. He came out in a small skiff propelled by two paddle-wheels, one on each side, which he worked by means of a crank while seated in the centre of the boat. It was an ingenious little craft of his own construction, and was named the *Fulton*. After he departed we weighed anchor and gave a parting salute, which was answered from the shore, and we then bade good-bye to the pleasant little place. We had enjoyed our stay very much, and hoped to have the pleasure of repeating it on our return from the regions farther north.

We were soon again on the open sea, sailing northward toward Upernavik.

The change from the strange sights at Godhavn to

the quiet monotony of the ocean was not ungrateful, for all were rather tired from our experience while in port.

We steamed northward along the coast, in sight of the land, all that day, the whole of the following one, and until four o'clock the next morning, when we sighted Upernavik. This place is about one hundred and eighty miles north of Godhavn, in latitude 72° 40′. The coast between these two places resembled that below Godhavn. It was of the same mountainous character, and showed no peculiar characteristics.

In approaching Upernavik the harbor is even more difficult to discover than was that of Godhavn, there being no prominent landmarks in the vicinity. Captain Pike had, however, been there several times before, and found the entrance without difficulty. The approaches to the settlement are quite tortuous, it being necessary to wind in and out among several small islands before the place is reached. On nearing the settlement the customary salute was fired, which was responded to some little while after. We arrived during the time of the day when most of the inhabitants were asleep. A few natives, however, witnessed our arrival, happening to be up and about at the time, and they were soon joined by the entire population.

The governor and assistant governor came out in a boat to see us, but were not so agreeable as our friends at Godhavn. This may have been due, in part, to the weather, which was cold, rainy, and disagreeable, and also, perhaps, to our making them leave their warm beds at such an early hour. We too were not feeling very

sociable, caused, no doubt, by the abominable weather and by our having remained on deck without any sleep for many hours, waiting for our arrival at the settlement.

UPERNAVIK.

The visit of the officials was of short duration and very formal. They read to us an extract from the Danish law governing these settlements, and left a copy, printed in

Danish and English, with Captain Pike. It read as follows:

NOTICE TO MARINERS IN THE DAVIS STRAITS.

The Board of Directors of the Royal Greenland trade make known:

1. It is agreed by treaties between the royal Danish government and the United States of America, Great Britain, and other States that the west coast of Greenland, between latitude 60° and 73°, be closed for navigation of foreign ships and Danish ships, except by special permission of the royal Danish government, by whom the monopoly of trade with Greenland is held.

2. Pursuant to the laws in force, any ship navigating without permission on the west coast of Greenland may be seized, wherever met with, and the ship and goods be confiscated. Similar punishment may be applied if any person or persons be found trading with the Greenlanders or Danish colonists from a ship lying in a port of Greenland or off the coast.

3. Shipmasters compelled by shipwreck or other causes to seek port in Greenland shall not remain in port longer than necessary. Shipmasters shall also be responsible for their crews not remaining on shore without necessity or in any way trading with the natives, with whom all intercourse is altogether prohibited.

4. The object of prohibiting the navigation of the west coast of Greenland and of maintaining the monopoly of trade is to protect the native population of Greenland. This population will be threatened with ruin if conta-

gious diseases be brought into the country, or if spirituous liquors or other similar articles be imported. The board will, therefore, be obliged to demand that the order prohibiting the navigation of Greenland in every way be respected, in case the crew of any ship should not strictly abstain from all intercourse with the native population.

COPENHAGEN, May 8th, 1884.

After a short conversation the governor and his assistant returned to the shore.

Viewed from the ship, the settlement was seen to be smaller and not so attractive and picturesque as that of Godhavn. Vegetation was even more scanty, and the place had quite a desolate and dreary appearance. It contained two dwelling-houses, one for the governor and the other for the assistant governor; there were also a couple of storehouses, and a stone blubber-house where the fats and oils were rendered and prepared for shipment. These buildings were similar in style to those which we had seen at Godhavn, but smaller and less pretentious. The Danish flag floated from a flagstaff placed in front of the governor's house.

The native huts, about twenty-five in number, were smaller and more dilapidated than those of the lower settlement. They are situated at the foot of a mountain, the water from the melting snow and ice of which trickled down through the village, making everything wet and muddy. We did not push our investigations very far into these hovels. The natives, numbering about a hundred, are a miserable, poverty-stricken looking set of

mortals. They had nothing to trade nor to sell but a few birds' eggs. We bought some of these, and found them good eating; they were the eggs of the wild ducks that frequented the neighborhood.

We were told that a whale-ship had called there a few weeks before our arrival, and the natives had then sold all that they had to dispose of. It was fortunate for us that we had obtained our supply of fur clothing at Godhavn, as otherwise we would have been unable to have gotten any. We went ashore, but only stayed a couple of hours, as the place possessed little of interest and the weather was disagreeable.

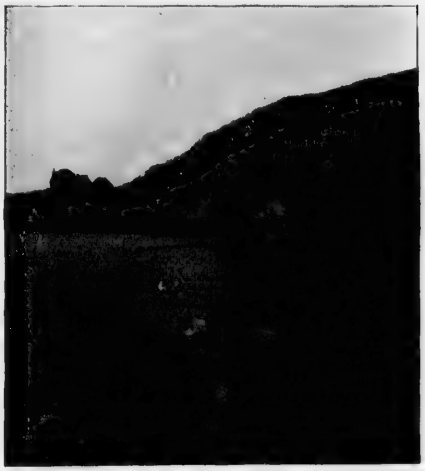
A dozen or more natives came out to the ship in their kajaks. These native boats are made of seal-skins sewn together and tightly stretched over a light framework of wood and bone, the seams being sewn so carefully as to be water-tight. They are about sixteen feet long, less than fifty pounds in weight, and just wide enough to accommodate a single person, who sits in the centre, on the bottom of the boat. They are sharp at the extremities, which curve slightly upward, and are decked over with skins, except a small opening in the centre, in

KAJAK AND PADDLE.

which the occupant sits. This opening is so small that it requires some force and skill on the part of the kajaker

to place himself in position without capsizing; so that in attempting to get in they usually steady the boat with a paddle put in the water over the side. After being seated an apron made of skin is drawn around them and tied fast under the arms, thus preventing any water from entering the boat. If, however, it should capsize, they are unable to get loose, and are often drowned. They use a double-bladed paddle made of wood, and propel their boats with great velocity in all conditions of sea and weather.

Fastened to the boat by means of leather thongs are the harpoon and spears which they use in hunting.



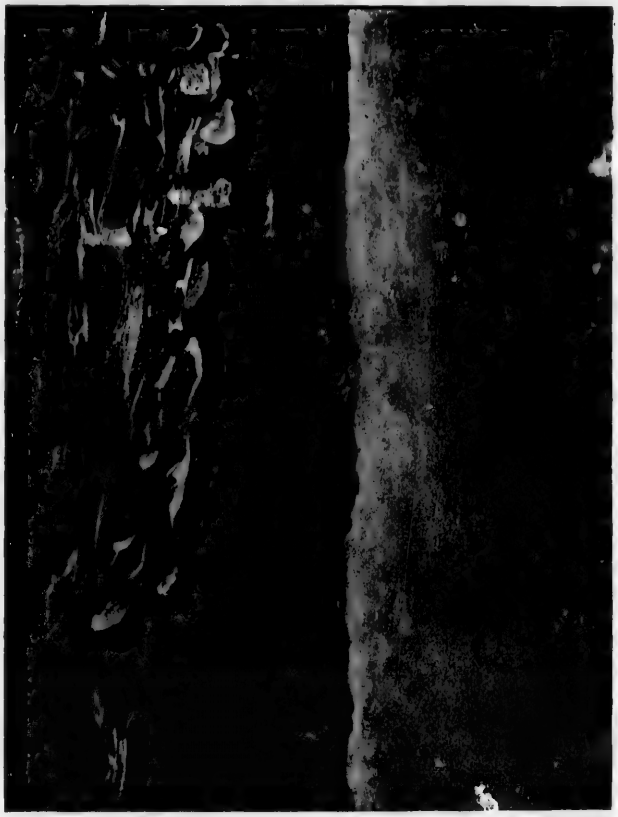
A KAJAKER, UPERNAVIK.

While wandering through the village our attention was attracted by a native who was evidently ill. On inquiry we found that he was suffering from an old injury

to the right shoulder. Examining him more closely, an opening was seen extending downward two or three inches from the point of the shoulder. In the cavity thus exposed bare dead bone was visible; this was detached with the finger and removed, and proved to be the remains of the head of the arm-bone. He had evidently been without treatment, and must have been suffering for months. When we saw him the wound had received no attention whatever, and was only protected by the fur coat which he wore. The dead bone having been removed, the wound would start at once to heal, and probably in a short time was entirely closed, though the use of his arm would be impaired.

The weather being thick and foggy, the ship was detained until 12 o'clock, when we got to sea and bade good-bye to Upernavik. The governor and his assistant were the last white men we encountered on the northward trip. Upernavik is in latitude 72° 40′, and is the last Danish settlement, with the exception of a still smaller one called Tussiacic, situated twenty or twenty-five miles further north. We did not stop there, because it was difficult of access and insignificant, and would only have detained us unnecessarily. We understood that the settlement was almost abandoned, no white men living there. Beyond this latitude Denmark has no jurisdiction nor representatives. In the afternoon the weather cleared up, many icebergs coming again into sight. We saw a native in his kajak, about three miles from the ship, in the vicinity of several small islands. He was miles away from any known settlement, and we

did not envy him his lonely life. On observing him through the marine glass he appeared to be coming

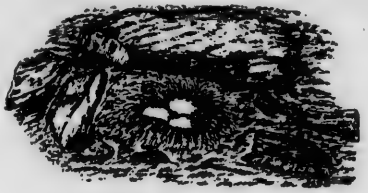


DUCK ISLANDS.

toward us, but, seeing that we kept on our way, finally turned about and paddled back to his island.

Early the following morning we reached Duck Islands. These were well named, as they teemed with ducks and

all kind of water-fowl. We shot about three hundred of them, and gathered three barrels of eggs in about half an hour. We also filled several large bags with the eider-down with which the nests were lined. These islands were about two miles in circumference, rather hilly, but not mountainous, and entirely free from ice and snow. The nests were not concealed in crevices in the rocks, but lay exposed on the ground, in many places but a few feet apart. They each contained from three to six large greenish eggs. The ducks themselves were so tame that they would remain on their nests until we were so near as to almost grasp them.



NEST OF THE EIDER-DUCK.

The ship was not anchored at these islands, but steamed slowly around them until the small boats which had taken us ashore had returned. This procedure was necessary in order to avoid a collision with the large icebergs which were continually drifting about us.

CHAPTER VI.

COLLAPSING OF AN ICEBERG.—IN THE MELVILLE BAY PACK.—FLOES AND PANS.—BUTTING THE ICE.—ARCTIC SPORT.—LIEUTENANT PEARY BREAKS HIS LEG.

SOON after getting under way we observed the interesting sight of an immense iceberg collapsing and falling into the sea with a noise like the loudest thunder. The reverberations were remarkable, and lasted quite two minutes. Many times before we had heard these thunderings and knew their cause, but this was the first time that we were near enough to see the interesting phenomenon. This large mass of ice falling into the sea caused considerable agitation of the water, and our ship, although at least one mile away, was very perceptibly rocked by the waves so produced.

Toward afternoon a prominent landmark came into view. This was a peculiarly shaped mountain on the Greenland coast, known as the Devil's Thumb. It is 2347 feet in height, and, towering far above the surrounding mountains, looks like a gigantic thumb extending upward from a hand. This marks the entrance to the dreaded Melville Bay. It was not long before we encountered a heavy floe of ice, and made but little progress. After a few hours' steaming we found what appeared to be a lead or opening in the ice, which was

immediately followed, but the water space soon became more and more contracted and we gradually lost headway. In one hour the ice had not only closed in front of us, but astern also, and advance and retreat were alike impossible. So much coal was used in our search for a way out that the captain gave up the attempt for the time being. We had only worked our way about five miles through the floe when we found our passage thus blocked. To our right the Devil's Thumb was visible, although quite fifty miles away. In front of us and to our left the ice stretched as far as the eye could reach. Even from the mast-head no water was to be seen but that to the south by which we had approached. The ice was quite level, except in places where some of the "pans" had been jammed up above the surface or where large icebergs were imprisoned in the mass.

There was about a foot of snow on the ice, and in this were seen the tracks of the polar bear; for Melville Bay is known to be a favorite place of resort for these animals. It is their habit to wander over the large ice-floes in search of seals, and this bay, so commonly full of floating ice, forms a good hunting-ground for them. These, the first bear-tracks that we had seen, caused us all to prepare our guns in anticipation of a sight of this much-wished-for game; but although we kept a sharp lookout for many hours, our vigil was unrewarded, as we failed to see a single one. Several photographs were taken of this dreary scene at midnight. The following day the ice loosened somewhat and we were able to advance a few miles, but at 5 P. M. we were again stuck

hard and fast. After several attempts we gave up all hope of making any progress that night. The ice was very heavy, being six to eight feet thick, and movement

A MIDNIGHT SCENE.

in any direction was impossible, as heavy cakes or fields of ice surrounded us on all sides, some of these being many acres in extent. Our hope was that on the morrow a change of wind or tide would free us and permit our onward progress.

We were now fairly in the Melville Bay pack. This bay is never free from ice, and is always a dangerous and difficult place to traverse. At midnight, the Fourth of

July was ushered in by firing the ship's cannon and a volley of musketry. We then ran up the American flags at the fore- and mizzen-masts, dipped the ensign, and gave three hearty cheers. While here imprisoned some photographs of our ship in holiday attire were taken, and two seals were shot and added to our larder. At noon the ice seemed to loosen somewhat, and by backing the ship a couple of lengths and going ahead at full speed we were able to force our way through enough of the obstructing ice to gain some open water.

This butting and pounding of the ice cost us over two tons of coal to move only fifty feet, which was a very serious matter to us should the necessity for it often arise, as we were far from any supply of coal and would need all we carried to enable us to get back to St. John's. We were making two or three knots an hour, which was very encouraging headway through such heavy ice.

At last the lookout man from the mast-head imparted to us the cheerful intelligence of more open water ahead. From the topmast a fine view for many miles around could be had, this elevated position not being so exposed and disagreeable as one would imagine.

In common with other Arctic whalers, our ship was provided with what is known as a "crow's nest." This consists of a large barrel bolted securely to the top of the foremast. It is provided with a seat and lined with furs. Surrounding the top of the barrel and extending about a foot from its edge is a light iron railing on which the lookout rests the telescope. The entrance is through a trap-door in the bottom, which is closed after getting

inside, and thus forms a floor to this lofty perch. Access to the crow's nest is obtained by means of a swinging ladder leading from the cross-trees to the bottom of the cask.

After working all night we came to a full stop at 8 A. M., and then made no progress for some time except with the drift of the ice, which seemed to be moving northward. Snow and rain fell alternately through the day, and kept us below deck. Some of the men went on the ice to look for seals, but returned in a few hours with no larger game than an ivory gull (*Gavia Alba*), a bird never met with south of Greenland. This was the first one we had seen, and a beautiful bird it was, having the color and gloss of pure ivory. We were no longer in sight of land; whether this was due to having drifted too far to the westward or to the thickness of the atmosphere it was impossible to determine, and we were compelled to await the appearance of the sun or a clearing up of the weather. The snow continued to fall until six o'clock the next morning, and, although not heavy enough to remain long on the deck, was sufficient to increase the whiteness of the surrounding ice. The day being dull and misty, the glare was not so trying on the eyes as if the sun had been shining.

The prospect of our leaving the ice was as bad as the weather. No attempt was made to move the ship, as from the crow's nest no water could be seen. The weather being so thick, it would have been impossible to see the land even if it were no further distant than when we first entered the pack. We had undoubtedly drifted

many miles with the ice, but in what direction we knew not. Anxious as we all were to get northward, being fast in the ice had not only become monotonous, but even more serious than we had at first thought. It was necessary to use considerable coal, even if the furnace fires had to be banked and only enough steam kept up to enable us to move as opportunity arose. The next day found the ice still firm and fast about us. Occasional light snow-squalls were experienced, but about noon the sun showed itself long enough to allow us to take an approximate observation, and by using a horizon of ice the latitude was found to be about 75°. We were unable to get the longitude, and so could not determine the distance we were off from the coast of Greenland. No land had been in sight for several days. The following day also was cloudy and dull, with snow-squalls in the afternoon. We were apparently as hard and fast in the ice as ever, with no indications of being able to move for some time. An observation showed that we had drifted three miles in a southerly direction. The temperature averaged 31° Fahrenheit, the lowest being 28°. The weather was cold and cloudy, and the frost about the ship and rigging gave everything a white and phantom-like appearance. The little water that was visible between the cakes of ice and around the ship had become frozen, and made ice a quarter of an inch thick.

Our position was rapidly assuming a more grave aspect, as we had now no immediate hope of being able to get out of the pack. The delay was becoming still more tedious and wearisome. We had nothing to do, and

nothing was to be seen but ice, ice everywhere. Once in a while a seal appeared, but very shy and hard to approach within shooting distance. We managed to get three or four guillemots (*Combia Froile*) each day, which were quite acceptable. They are a species of duck and delicate in flavor, not being so fishy as some of the other birds we had eaten.

As if by magic, early the next morning the ice, which had held us so firmly in its grasp, began to loosen, and Mr. Kenealy, in looking over the side, noticed that the ship was afloat, and called attention to it. The captain immediately ordered steam up, and on starting ahead the ice yielded and we were able to steam for about half an hour, when a heavy fog so enveloped everything that it was useless to proceed, as it was impossible to pick our way through the vast floes which still remained ahead. This sudden and remarkable change in the pack, loosening so quickly after being solid a few minutes before, is not unusual, though difficult to explain. The favorable change made us all more hopeful and cheerful than we had been for some time. The fog continued dense all day, but late during the night it began to lift. We had yet several hundred miles to go before reaching our objective point in the north.

The prospect of success was not encouraging, for we knew that we had many miles of ice yet to pass through, as open water was known to be scarce from here northward. This task would have to be accomplished and a return made to a point further south than Melville Bay to ensure us getting home the same year. The thought

of passing a winter in this lonely clime, with its months of cold and darkness, was far from our wishes. Our food-supply was not sufficient to ensure us enough to eat, and this, with the memory of other unfortunate expeditions, presented such a gloomy picture that we endeavored not to think of it. On the 11th of July land was sighted, but so far away and indistinct that the locality was unrecognized. Although the temperature was 22° Fahrenheit, the ice continued to loosen, and we were able to make about ten or fifteen miles. This was the distance actually steamed, but it was done in winding around and between large fields of ice, and at the finish did not put us far from our starting-place.

At eight o'clock on the evening of that day a distressing accident happened to Lieutenant Peary. He was standing near the rudder-chains, in the stern of the ship, when a large block of ice struck the rudder with great force, throwing the tiller violently to one side and tearing the wheel out of the hands of the helmsman. The right leg of the lieutenant was caught between the rudder-chains and the wheel-house, fracturing both bones at the lower third. This, of course, completely disabled him for the rest of the voyage, and, occurring as it did at a time when all were more or less worried by the unfavorable prospect, exerted a very depressing influence on us. Several of the party thought it better to abandon the attempt for this year, but to this Lieutenant Peary would not listen. He insisted that his leg would be sufficiently strong by the following spring to enable him to execute his original plans, and that his assistants could

undertake and carry out for him the work that he had laid out to do in the autumn and winter.

Under these circumstances there was nothing to do but to proceed. He was carried below, a bed prepared in the cabin, and the injured limb attended to. Most of the following day was spent in pushing and butting through the ice, which was somewhat looser than the day before. The fog still continued, and it was impossible to make much progress. Some open water, about half a mile distant, was seen from the crow's nest, and to reach this was our principal aim. Once there, we could wait for the fog to lift and have a safer and more favorable resting-place for the ship. We desired, above all, to get a sight of land, in order to enable us to lay a course with some precision, as our ship's compass was very sluggish, owing to our proximity to the magnetic pole. We succeeded at last in reaching the open water, and in a few hours the fog lifted, thus enabling us to make considerable progress through the now weakened and broken ice.

During the afternoon we found quite a number of leads and more open water. Unfortunately the weather again became thick, and as it was impossible to see far ahead of the ship, it was found useless to continue our efforts. The water-course, if followed blindly, might lead to more heavy and troublesome ice than any which had yet been encountered, besides taking us far from our destination, as much of our course had been run entirely on dead reckoning. The thermometer was as low as 20° during most of the day, yet it did not feel as cold and

disagreeable as during some previous days with a higher temperature.

Although the thickness of the atmosphere was extreme, the decks and rigging of the ship were comparatively dry. The humidity of the air turned to minute and delicate frost-crystals upon reaching the coldness of the sea-level, covering the ropes with a beautiful and fantastic white coating that gave to the vessel a weird, even ghost-like, appearance. The weather continued bad and the ice was still heavy, the cakes being larger than before. More open water was met with than on any day since entering the immense pack. After butting the ice for an hour or two we were enabled to enter open water and steam for a couple of miles, and then the butting and smashing again began, and lasted till another stretch of water was reached. As the day wore on the weather became clear and fine, and was of great assistance in the navigation of the ship. We were favored, that afternoon, with the first sight of land we had had for over three days—to us a most agreeable change. It was too far away for us to be able to recognize any distinguishing landmarks, but we ran toward it, and expected to make out our exact position the following day.

The "butting" or forcing our way through the heavy ice was a most interesting procedure, although at times somewhat terrifying. A person seeing it for the first time is so impressed that he is not likely ever to forget it. We were compelled to resort to it so often while in the Melville Bay pack that it ceased to be a novelty, and only when it was so violent as to throw one of us to the

THE "KITE" IN MELVILLE BAY.

deck or out of his chair did it cause comment. "Butting," to use the term used by sailors in these seas, consists in forcing the ship against the large floes or pans of ice, either to break them into fragments or to force them to one side.

The "pack," as the whole great field of ice is called, is made up of "floes," some being so large that the eye can hardly see their further extremity, and "pans," which are small, often amounting to little more than ice-blocks. The edges of these ice-fields are of course very irregular, and between them, in the summer-time, are passages or "leads" of water. Often one floe just touches another by a single corner, and beyond, the lead widens out into quite a channel. It then becomes necessary to break off this corner to reach the channel. This is accomplished by backing the ship for several ship's lengths and then steaming at full speed ahead against the projecting corner. The shock, as the prow of the ship strikes the ice, is terrific. Sometimes the corner breaks off and the ship slips easily through into the new channel, while more frequently, so far as the novice can see, no appreciable effect is produced. Then the evolution is repeated again and again until the end is accomplished or the captain sees that further efforts are useless.

It need scarcely be said that the work requires the greatest skill, knowledge, and caution. If the corner is broken, it may cause the ice-fields to revolve toward each other, the channel to close, and put the ship in great danger of being nipped and crushed by the heavy

floes. All possible circumstances must be taken into consideration by the ice-pilot, and it gave us a feeling of confidence to see these hardy Newfoundland sailors attack the ice with such perfect assurance and calmness.

At times, even when the floes are quite thick, the ice is broken without difficulty, while on the other hand the ship is often brought to a standstill by mere tongues or slight projections which seem to defy the force of steam. In the latter case one always has to act with great caution, since it shows that heavy pressure is keeping the ice firm and solid. When such a tongue is broken the floes are apt to come together at some other point, not, as we had imagined, with suddenness and force, but with a scarcely perceptible movement. They seemed to revolve upon their centres on the release of the point of impact, slowly but surely approaching each other until they again touched, and, crushing their edges, came to a complete stop when the resistance of the great floes checked the force of the currents which moved them. Of course a vessel caught in such a closing channel has scarcely a chance of escape. If the ice catches her amidships, the sides are crushed as if made of cardboard, while if, by some fortunate accident, she rises on the floe, she must remain imprisoned until another change breaks up the ice-field and again allows her to float, should the rough treatment received not have made her totally unseaworthy.

This is the cause of most of the accidents which occasion the loss of vessels in the Arctic regions. It was in

this manner that the *Proteus* was wrecked when within a few yards of open water. Our captain told us that those on the vessel, being unfamiliar with the ice, refused to believe in the danger, insisting that the ship could accomplish the slight remaining distance, and would not believe, until the ice actually came through the ship's side, that the vessel was in such imminent peril. Only a few hours after the accident the floes again separated in the same slow, majestic manner in which they had come together, but the *Proteus* sank instantly to the depths of the ocean, and what would have proved her homeward path, without difficulty or danger, was traversed in the whale-boats by which the retreat to safety was made.

In the midst of the great ice-packs there are frequently "lakes" or spaces of open water, through which the ship can pass until another icy wall stops its progress; then a new "lead" must be looked for, and the butting recommenced.

So the days slipped by, sometimes finding good leads, while others were completely blocked by the masses of ice in front. We tried always to make some progress, and generally succeeded in finding a safe anchorage for the vessel when it was found impossible to proceed farther. The ship in these waters is not anchored to the bottom (for this, we found by sounding, was from six to nine hundred fathoms deep), but to the floes themselves, and for this purpose it was provided with claws or great hooks of iron. When progress was barred the sailors ran out upon the ice, and, cutting a hole in the floe, sank

the hook deeply in the solid ice, thus preventing the ship from drifting from the favorable position which had been selected until some movement of the pack opened up a fresh lead.

CHAPTER VII.

AN ACCIDENT TO THE SHIP.—NIPPED IN THE ICE.—BLASTING.—WE KILL A BEAR.—TABLE ICEBERGS.—CAPE YORK SIGHTED.—DRIFTING WITH THE PACK.

OUR progress was of course exceedingly slow. On July 15th the weather cleared a little and land was seen in the distance. Observations showed that we were in latitude 75° 1′ north, and that, consequently, in eleven days of constant struggle we had advanced only fifty miles. Nevertheless, patches of open water were more frequently met with than before, and this was accounted by the experienced sailors as a most encouraging sign of our release from what had grown to be an almost intolerable imprisonment. The weather was bright and pleasant enough to allow one to go upon deck or on the ice without suffering in the least from the cold. In these high latitudes the heating effect of the sun's rays is like that felt on a mountain-top, and even though the thermometer was constantly below the freezing-point our heavy clothing often felt oppressive.

In the afternoon, while steaming along through comparatively loose ice, the rudder was struck by a heavy ice-cake and a link of the rudder-chain snapped. This was an unfortunate accident, for it involved a delay of three hours for repairs, and by the time they were com-

pleted our favorable lead had closed and we were again brought to a complete stop. An examination of the fragments of the chain showed that it's breaking was due to the fact that the iron had been crystallized by the repeated shocks and blows to which the metal had been subjected.

The lead opened on the following morning, and the operation of butting and forcing the ice was again resorted to. We made fair progress, though the weather was thick and misty until about 4 P. M., when we found ourselves in a small lake. While the opposing wall was being diligently searched for a lead it was noticed by the captain that the floes constituting the sides of the lake were gradually coming together, and we found ourselves confronted with the possibility of a "nip," that worst of all Arctic accidents. A lake was opening just ahead of the ship, and to it the captain determined to try and work his way. A narrow lead passed from one lake to the other, and into this channel the ship was forced. We had almost passed through, but a single angle of the ice barring our passage and the bowsprit overhanging the place we desired to reach, when we suddenly found that our progress was completely stopped. The ship refused to go either ahead or astern, and it was evident that it was caught between the edges of the floes which constituted the borders of the lead. We were nipped in the ice.

Captain Pike and his crew realized, of course, the peril in which we were, but, like true sailors, gave no evidence of it, nor did any of us know of the danger until it was safely passed. The sailors, followed by many of

the party, at once jumped on the ice and attempted to open a passage with crowbars and wooden beams. It was found, however, too thick to render this feasible, and we were initiated into another Arctic device: holes were drilled in the ice, and a bottle filled with gunpowder, attached to which was a fuse that had the power of burning under water, was tied to the end of an oar; the fuse being ignited, the oar, with the bottle attached, was shoved through the opening and down under the edge of the ice, where it exploded. The first attempt failed on account of the imperfect sealing of the bottle, and the second failed for the same reason; a third bottle exploded, but without effect on the ice. Two more were simultaneously exploded, and a great cake was blown from the edge. The ship was at once put astern, and in a few minutes it was in comparative safety in a corner of what had been the large lake we had left.

So little did we realize the danger of our situation that those of us who were not assisting the crew spent the time in gambolling on the ice with the dogs or in photographing the ship and the men endeavoring to release her. The next day the captain pointed out the location that the ship had occupied. It was piled up with irregular blocks of ice from thirteen to twenty feet above the surface of the floes, showing the terrific force with which these had come together; yet so slow and majestic is their movement that it is only after such an object lesson as this that one can realize the force behind them.

This was destined to be an eventful day. The ves-

sel, soon after, having been made fast to the ice (a safe harbor for it having been found), some of the party started out upon the floes to shoot the guillemots which

Keely. Burk. Kenealy. Gibson.

IN ARCTIC ATTIRE.

were everywhere plentiful, while the rest retired to the seclusion of the cabin, not relishing the damp, cold air, and amused themselves by reading and chatting. It was about 10 o'clock at night when one of the sailors opened the door of the cabin and, in a voice of suppressed excitement, uttered the single word, "Bear." In an instant all was confusion, for we were all anxious to view the greatest game of the Arctic region. Each one made a jump for his rifle and then rushed for the door. On reaching the deck we looked out upon the ice and saw the bear. He was about three hundred yards off, and the excitement his presence occasioned was increased

when it was discovered that he was leisurely but surely approaching the ship with his peculiar lumbering gait. He would stop every few yards, hold up his head, then swing it slowly from side to side, and again approach. By the captain's direction we crouched behind the bulwarks of the ship and rested our rifle-barrels on the rail. It is the habit of the polar bear to approach any strange object he may see until he comes near enough to scent it. His eyes are quite small and his vision poor, and he frequently approaches vessels which are out of his range of scent.

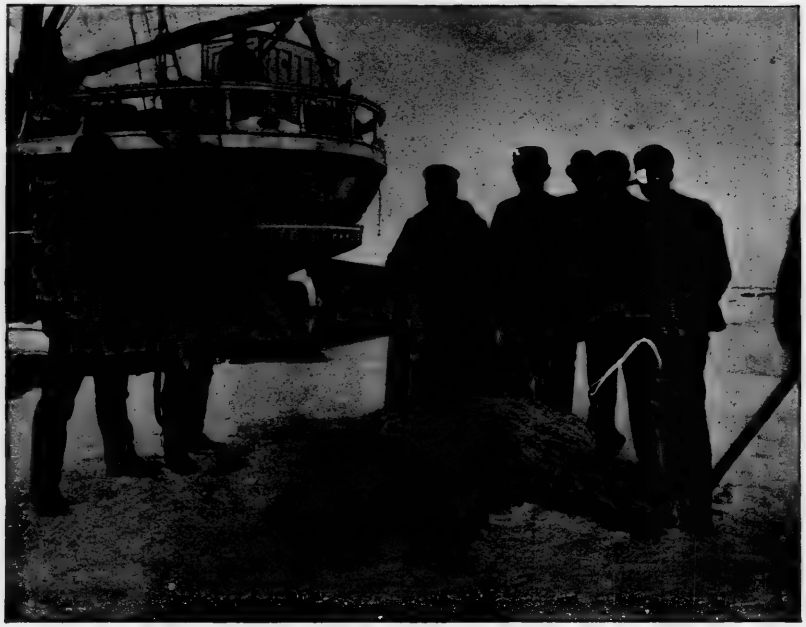
It was fortunate that the wind was blowing strongly from the direction in which he was coming, and he was unable to discover, by his keen sense of smell, what or who we were, or to realize the danger he was incurring.

While he was slowly approaching the captain went below to invite Mrs. Peary and the rest who were in that part of the ship to come and see the great animal. By the time they reached the deck he was much nearer than when first discovered, and still continued his approach, though stopping more frequently to regard the ship, and then alternately walking and loping in a playful manner, evidently determined to investigate the curious monster. This most interesting performance was cut short, when he was but fifty yards from the ship, by the sound of a shot fired at some birds by the party out on the floe, who, being in the opposite direction, had of course no idea of the situation. Instantly the bear stopped and reared upon his haunches. This was too much for one enthusiastic watcher, and, against the

accepted order that we should all fire together when the signal was given by the captain, he shot at the bear. The report of his rifle was hardly heard when a volley was fired and the bear staggered and fell. We supposed, of course, that he was dead, and jumped from the side of the vessel to reach and examine him. The great white bear is not, however, so easily killed, and before we could get to him he was on his feet once more and made a staggering rush for the water. His shoulder was apparently broken, and he fell frequently, but still stumbled on, while those on the ice who had taken their rifles with them fired shot after shot in vain. The excitement before the volley was fired was very great, but now it was at fever pitch, for we knew from what we had heard that if he reached the open water he was safe.

The Arctic sailors call these beasts the water-bear, because they can swim with greater speed than a boat can be propelled by oars. If the bear was not dangerously hurt, therefore, he would escape, and if, as we found afterward to be the case, he was mortally wounded, his body would sink, and thus again we would lose him. The shooting was consequently of the wildest description, and probably very few of the bullets reached the target. Staggering, falling, and leaving a broad trail of blood on the snow-covered ice, he ran for the lead, some two hundred yards off, and had almost reached the edge of the floe when a well-directed bullet struck him in the base of the skull and he succumbed: the prey was ours.

Many willing hands manned the boat, which was at once launched, a line was put about the bear's neck, and



THE DEAD POLAR BEAR.

he was towed in triumph to the side of the ship. Here, lying at full length on the ice, he was photographed and measured. He proved to be a full-grown male. In his body were numerous bullet-holes, showing that almost all the bullets of the original volley had struck him. One had pierced his heart, while another had broken the shoulder. To have been so active, and to have shown the vitality which he did after receiving such serious wounds, shows the remarkable endurance of these animals. He was accounted by the sailors to be a large specimen, and measured seven feet one inch in length, and stood three feet four inches high at the shoulders. The sole of his foot was fourteen and one-half inches in length, and he weighed between six and seven hundred pounds. The fur was very thick, long, and of a yellowish-white color, in marked contrast to the pure whiteness of the snow. His claws and teeth were very large, and his skull so thick as to be almost invulnerable.

As Lieutenant Peary desired the meat for provisioning his camp, the hide was removed and the rest of the carcass cut into quarters, as is commonly done with beef. Most unfortunately, the two hind quarters were lost while being washed preparatory to hanging them in the foretop for preservation. A careless sailor had fastened them to a line with a loose knot, and, slipping from this, they sank. The rest was safely stored away, to be added to the larder of the little encampment at Whale Sound.

Thereafter a careful watch was kept for these great animals, but, although tracks were plentiful, we were

not rewarded with the sight of any more until two days later, when a she bear and her two cubs were seen at a considerable distance from the ship, their yellowish fur making them clearly distinguishable against the icy background. The vessel was headed in their direction, and, as in the case of the former bear, they evinced no fear of the strange object. Unfortunately, we were compelled to go to windward, and as soon as the scent reached them they commenced to retreat. The mother bear could run like a race-horse, but she stopped every once in a while to urge her cubs to greater speed. Being out of range of our rifles, a chase was organized. The party on the ice presented a rather ludicrous picture running and stumbling over its rough and hummocky surface, while the bears progressed without the slightest difficulty and at a far greater rate of speed. The chase was soon abandoned and the party recalled, the ship itself being started in pursuit; but the lead was filled with blocks of ice which retarded our progress, and the bears were so thoroughly frightened that they disappeared without a single shot being fired, and we saw them no more.

After the excitement of the killing of the bear had subsided the monotony of the voyage was again resumed. On the next afternoon snow fell in large quantities—larger, in fact, than at any time since we had started north—and the day looked like a midwinter one at home. We steamed ahead at the rate of four knots an hour for twenty-four hours, the water being now comparatively open. Much drift ice and enormous table icebergs were passed, but by careful steering we avoided all collisions.

It is difficult to estimate the size of the great bergs set free from the glaciers of the far North. The guesses of the novices were apparently as accurate as those of the experienced sailors. All, however, agreed that those we saw that day surpassed in size any seen before. One was thought by the officers of the *Kite* to be more than six miles in length, and stretched its vertical walls fully

A GREAT NORTHERN ICEBERG.

three hundred feet above the water. The crow's nest on our mast-head was seventy feet above the deck, and at this height it was apparent that the top surface of the great table of ice was still far above it. The bergs met with in this locality were quite different from those previously encountered. They were no longer rugged in outline, with pinnacles and varied shapes, but, rather, huge blocks of ice, nearly square and of immense size. They had evidently been recently released from the

great glaciers of the North, and the water and air had not yet had a chance to carve them into the curious spires, caverns, and towers which had characterized the icebergs seen floating from the glaciers further south.

The drift of the water in these seas, so far as could be made out, was northward along the west coast of Greenland as far as Melville Bay. Here the stream is deflected to the west by the southerly flow of the Arctic current and the projection of Cape York, and, sweeping down the east coast of North America, emerges finally in the open ocean south of Newfoundland. Occasionally this icy current flows down our Atlantic coast, and bathers are then made to suffer from the lowered temperature of the water.

On July 18th we caught a glimpse of Cape York, but the weather was cloudy and foggy, and we could not be sure of our exact position. The next day found the weather still dark and gloomy. A bitterly cold wind from the south-west was blowing, and the black, threatening sky gave the scene an appearance of midwinter. An occasional snow-squall added even more to the dreary outlook, and gave us a faint idea of the misery and hardships to be encountered in regions farther north.

No attempt was made to move the ship. We supposed that we were still somewhere in the neighborhood of Cape York, but as the day was dark and our compass so uncertain, and we had had such an imperfect sight of land, we did not know in which direction to proceed. The ice was troublesome—so much so that we were enabled to make but a few miles in the direction in which

we inferred the land to be. The icebergs were very numerous, and still larger and higher than any we had yet encountered. On July 20th, at 4 P. M., the fog rolled away sufficiently to allow land to be seen to our right, and Cape York, latitude 76° 2′, longitude 68° 4′, distant only seven miles, was in plain view. The chronometer was found to be correct, and the prospects of our voyage looked more encouraging. We had intended landing on the cape to undertake some explorations, but ice was again more abundant, and it was found impossible to reach the shore; indeed, so heavy and treacherous was it that even if we had succeeded in gaining the land our return to the ship might have been made impossible by the breaking up of the floe.

Mr. Dumphy, the second mate, having gone a short distance away from the ship on the ice, was surprised to find a small piece of board about a couple of feet long. Many were the speculations and conjectures indulged in as to its mode of getting there. We could think of no more plausible explanation than that it had been thrown overboard from some whaler which, possibly, might have preceded us earlier in the season. Small though the incident was, it served to break the monotony of our stay in the ice, and gave, for the time being, a new direction to our thoughts.

This day was bright, warm, and sunny, the best we had enjoyed for two weeks, and a most agreeable change. To the north the ice was as heavy and impassable as that which was between us and the shore.

Our anxiety was increasing daily. We were desirous

of reaching our destination as soon as possible, for the summer was passing rapidly, and it would soon be necessary to commence our return. Delay would increase the danger of our being caught in the ice, and perhaps compel us to remain all winter. The following day was also bright and clear, and the land near enough to allow us to get a good idea of the country. Several large glaciers were plainly visible, and the snow-covered mountains were grand and imposing. The ice continued to bar our way, and to the northward was one solid pack whose limit could not be made out from the mast-head. It was the most formidable ice we had yet encountered, and we feared it might prevent further progress.

We waited here four days, hoping all the while for the ice to break and permit our passage. To the south we still had a good chance to escape should we deem it advisable to beat a retreat and renounce all hope of reaching Whale Sound, which was still one hundred and sixty miles to the northward. Matters now assumed a rather gloomy look. It was impossible to land Lieutenant Peary on the shore at this point, even had he desired it; and, could we have done so, it would have been necessary for our small party to drag all the stores, supplies, and materials for his house, on improvised sledges, over the rough and treacherous ice a distance of ten miles. At any time the ice-pack might have broken up and drifted far away, leaving perhaps part of the lieutenant's effects on the land and the rest on the ship, which, caught by the drifting ice, would have been unable to return and land the remainder. Any plan which involved the pos-

sibility of such a separation of the party and stores would imperil the success of the enterprise, besides leaving the expedition a hundred and sixty miles farther south than had been anticipated, and was not to be thought of.

Lieutenant Peary was still confined to the cabin with his broken leg. He was very patient and hopeful throughout this trying ordeal, and, notwithstanding having all the responsibility of the expedition resting upon him, remained cheerful and sanguine of success. This served greatly to cheer us at a time when we most needed encouragement. On the afternoon of the fourth day a strong wind from the east came up, and was regarded as a favorable sign by our captain, who said that if it continued for a couple of days it would separate the ice and leave us a channel by which we might be able to work our way onward. The pack seemed to be drifting northward, taking us along with it. This appeared to be due to a surface current, as the icebergs drifting south showed the existence of a deeper current tending in that direction.

There was no lack of sport. Thousands of birds were to be seen in every direction, and in such flocks that many could be brought down by a single discharge. There were several varieties, but the dovkie or little auk were most numerous, and were brought to the ship by the hunters in considerable numbers. Hardly a day went by without a seal or two being obtained, and, with the meat of the bear lately killed, our table was plentifully supplied with fresh meat.

CHAPTER VIII.

FREE ONCE MORE.—CAPE PARRY AND WHALE SOUND.—AN ESKIMO VILLAGE.—THE NATIVES.—CONTRAST WITH THE FUEGIANS.—RELICS FROM ESKIMO GRAVES.

ON the 23d of July, at 6 o'clock in the morning, an unlooked-for breaking up and drifting of the ice-pack occurred. The ice began to show signs of separating, and within an hour or two a channel large enough for the ship to sail in was ready for us. Steam was immediately raised and a new start made for our destination. As we proceeded the open spaces became more abundant, and in a couple of hours we were in water free from packs and floes. Icebergs were still numerous, but so large and far apart that we had no difficulty in avoiding them. After getting out of the ice the run from Saunders Island, where our release occurred, to Cape Parry, which marks the entrance to Whale Sound, was made during the day. Cape Parry was reached at about 10 o'clock P. M., after a day of most charming weather and a stiff breeze which caused just enough swell on the water to give the ship a pleasant motion and to impart to us a feeling of freedom after being so long held in the ice-pack. Land was in sight all the way up; it was high and barren, and we noticed that much less snow was present here than further south. Altogether, the locality

was more attractive than the parts of Greenland seen before.

Cape Parry marks the entrance to Whale Sound, which is a wide channel between the coast of Greenland and Northumberland and Herbert Islands, and serves as one of the entrances into Inglefield Gulf. The latter is a large body of water separated from Baffin Bay or Smith Sound by three large islands, Northumberland, Herbert, and Hakluyt. It was on the northern side of Inglefield Gulf that Lieutenant Peary desired to land, but, finding Whale Sound open, we skirted along the shores of Cape Parry, seeking to gain an entrance to the gulf. Cape Parry is marked by a huge and almost perpendicular cliff of red sandstone and basalt, crowned, as usual in Greenland, with a perpetual ice cap, and broken here and there by small glaciers and deep fiords. As we coasted along in the full sunlight the cliffs presented a most picturesque and beautiful appearance. At times we would see in a valley a torrent, formed from the melting snow and ice above, come dashing over the mountain, forming beautiful cascades in its descent. After entering the sound the ship was put under an easy head of steam and we slowly cruised along the southern shore. The principal object was to find an Eskimo village which was known to be situated thereabouts. We had already found our charts of these waters so faulty and incomplete that, outside of prominent capes and landmarks, we placed little reliance on them; consequently the navigation of the inland waters was necessarily slow and dangerous.

After steaming along the land for some miles we discovered what appeared to be three or four skin tents. The marine glass showed natives and dogs and other signs of life. We approached to within about a mile of the village, but hesitated to go nearer, as everywhere were seen large boulders and masses of rock that had fallen into the water from the heights above. The tents were seen to be located on a comparatively level plateau, near the entrance to a fiord, whose shores were lined with glaciers. Captain Pike feared to enter the fiord itself, but kept the *Kite* near its mouth while the village was visited by the party. The whale-boat being lowered, we soon arrived at what appeared to be the most available landing-place. This consisted of a rocky slope of nearly 45°, and, as we found later, was the place where the natives hauled up the carcasses of walrus, seal, and other animals killed in the chase. It was by far the most desirable landing-place we could have selected. The tents were situated on a bluff at some distance from the water, and were almost impossible to approach except from the spot at which we had landed. The natives were there ready to meet us, and seemed delighted at our arrival.

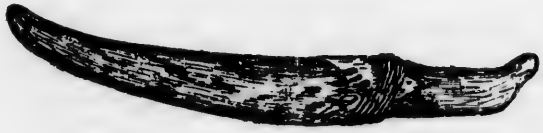
The village, if such it could be called, was composed of only three rude skin tents supported on narwhal-horns, and evidently was only the summer home of the little tribe, as a number of more permanent structures, composed of earth and stones, were seen near by. While we found only three tents, these stone huts numbered above a dozen, indicating that the settlement was much larger

during the winter months. The small number of the natives was probably due to the absence of many on their summer hunting trips. The entire population, at the

THE NATIVE CAMP AT WHALE SOUND.

time of our visit, numbered twelve—four men, three women, and five children. These were the first of the so-called "Arctic highlanders" of Captain Ross that we had seen, and interested us greatly. The children, as was the case elsewhere in Greenland, were pretty and healthy looking, but the adults were filthy and anything but attractive. I was among the first ashore, and, extending my hand to the Eskimo who appeared to be the chief, and offering him a piece of tobacco, was somewhat surprised to see that my courtesy was not understood. He seemed delighted to see us, but had no knowledge of our custom of shaking hands as a mode of salutation. The tobacco which I gave him he handled in a way which

showed to me at once that he was unfamiliar with the article. One of the sailors, who, at the time, happened to be smoking a pipe, was regarded by them with the greatest wonder, and they were evidently puzzled to account for the smoke which came from the man's mouth. We had found Eskimos who rarely, if ever, saw white men. Their location, of course, would have rendered impossible any visitation of whale-ships, which seldom get so far north as this latitude. Even if they did, they would not be likely to venture into such unknown waters unless on a mission similar to ours. This first impression was confirmed by a visit to their tents and houses. With the exception of a few iron tips to their harpoons, a small piece of sheet lead, the iron end of a boat-hook, and a sewing-thimble, which a woman produced in great triumph, nothing was seen which showed con-



KNIFE WITH IVORY BLADE AND WOODEN HANDLE.

IVORY PIN, TWO-THIRDS ACTUAL SIZE.

tact with their civilized brethren. It is possible that the few natives in this out-of-the-way place obtained these bits of civilization through some of their more fortunate kinsmen meeting whalers or Polar expeditions during their summer hunts, as they are known to journey, on

such trips, far from their winter quarters. They manifested unusual delight when shown needles, knives, etc., and for a few of these articles we were enabled to get all the curiosities desired. A knife bought a reindeer-skin, and for a needle we received an ivory walrus-tusk. A curious piece of steel used in skinning seals, brought from Godhavn, was exchanged for two large narwhal-horns.

Many and varied were the curios gotten by our party, and I am glad to say that, although the rate of exchange was so much in our favor, we left them with a supply of material that was of far more service to them than the things they parted with. A skin house, with its interior fittings complete, and a large sledge most ingeniously made of driftwood, bone, and ivory, were obtained in exchange for a hatchet, a saw, and two files. Two or three boards and an empty flour-barrel pleased them beyond description, as it provided them with enough wood to make their harpoons, paddles, and sledges without the months of labor which had evidently been expended in binding together the numerous fragments of wood and bone of which their sledges and other implements were constructed.

During our stay we had an excellent opportunity of observing their mode of life. Their food consisted of the flesh and blubber of the walrus, narwhal, and seal, and we saw lying in the neighborhood of their tents, on the bare ground, the partially-consumed carcasses of several of these animals, the walrus predominating. The flesh was neither frozen nor decomposed, and appeared to have been recently obtained. At irregular intervals, according

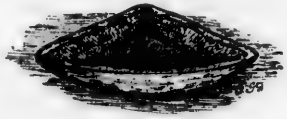
as their hunger moved them, they would cut from a carcass, with an old knife, a long strip of flesh or blubber so large that it would barely go into their mouths. This strip was held in the teeth, while, with a sawing move-

ESKIMO KNIVES.

ment, a morsel was cut off so close to the mouth that their noses appeared to be in imminent peril. Thus, without cooking or other preparation, they ate the dirty mass of fat and flesh, apparently with great relish. We saw no cooked food of any description, nor any sign of the use of vegetable food. So far as we could determine, they are entirely carnivorous, the fat and oil of the blubber taking the place of the vegetable food demanded by our systems. The teeth of the Eskimos, as far as we observed, showed no evidence of decay, and, instead of losing them by disease, they are generally retained until

death, as was shown by the skulls which were brought back. As a rule, they were very much worn away, it being quite common to see the entire crown of the tooth gone and the dentine exposed, surrounded by a narrow rim of enamel. This wearing away is probably due to the chewing of the tough animal tissues on which the natives subsist, the residue of which, after having been deprived of all nutriment, is spit out. The custom they have of chewing the garments in order to make them more pliable also aids in accounting for this condition.

The interior of the tents was furnished only with a heap of skins and rubbish on which the occupants slept. In one of them a lamp was found burning. It was made of a slightly hollowed slab of soapstone or something similar, and was filled with fat squeezed from blubber. In it was a wick made of twisted moss; this, though burning with a rather dull and sickly flame, seemed to be the only means they had of getting heat and light. They obtained their fire, apparently, by the use of flint, and tinder made from dried moss. The surroundings of the village were filthy in the extreme. Bones of animals and birds and half-decomposed fragments of animal refuse lay around in every direction. Two leashes of Eskimo dogs, securely tied near the tents, regarded the strangers with distrust.



LAMP MADE OF SOAPSTONE.

The natives themselves were as friendly as possible, evincing their pleasure at seeing us in gestures and cries

and following us everywhere. The children, however appeared frightened, and one or two cried piteously if we approached them. One of the men seemed to be demented or idiotic. He uttered hoarse guttural cries, and would walk around members of the party with a curious step, occasionally shouting with seeming gratification. We noticed that he did not accompany the other men, but was left with the women and children. It was of course impossible to understand them except by motions, but these were readily interpreted. The men were well formed and slightly below the medium height.

AN ARCTIC BELLE.

Their complexions were swarthy, and one or two had small beards or moustaches. The women were short and squatty, with faces broad and good-natured looking in

spite of the small and slanting eyes and wide mouths. The costume worn was the same in both sexes, and consisted of a skin jacket and breeches. Some of the women had double jackets, the inner being made of bird-skins and the outer of seal. In this case the leather side was worn next the skin, the fur being on the outside. All of the people were indescribably filthy, and had evidently never had a bath in their lives. The odors about their tents were nauseating, and their bodies seemed to give off the rank smell of seal oil.

The plateau on which they lived was about a quarter of a mile broad and stretched back to the high cliffs of the mainland. It was covered with flowers and grasses, and moss grew in abundance. Altogether, they had selected a choice spot for their camp, which overlooked both the fiord and the waters of Whale Sound, and seemed to be perfectly contented with their lot.

I was greatly interested in observing the peculiar habits and mode of life of these most northern Eskimos, and in contrasting them with those of the natives of Terra del Fuego. The Fuegians are the savage inhabitants of the island which is situated at the extreme end of South America, being separated from it by the Strait of Magellan. The interior of the country has never been explored, and the only knowledge we have of any inhabitants is of those living on the shores bordering the strait. From this circumstance they are sometimes spoken of as "the dwellers of the straits."

Three years ago, while voyaging from Philadelphia to San Francisco, I passed through the Strait of Magel-

lan, and had an excellent opportunity of observing the natives. The passage through the straits was a tedious and difficult one, consuming nearly a week's time. This was occasioned by the peculiar character of the currents and tide, which often necessitated our lying at anchor for many hours at a time. It was during these periods that the natives came to the ship and we were enabled to visit the shore. The Eskimos, although living in a far more desolate and rigorous region than the dwellers of the straits, and having less opportunity for contact with civilized man, yet exhibit greater intelligence and ability in providing for their wants than do the Fuegians. Why this should be it is impossible even to conjecture. All travellers agree in placing the Fuegians the lowest in the scale of humanity. Inhabiting, as they do, a land in which rain, sleet, and snow are of constant occurrence, and a day of continuous sunshine almost unknown, they are yet too ignorant to clothe themselves, notwithstanding an abundance of fur-bearing animals. They scarcely make any attempt at protecting themselves from a climate that is more trying to the health of humanity than any encountered beyond the Arctic Circle.

The Fuegians that I have seen were absolutely without astonishment at anything that was shown them, and had not the slightest conception of the use, effect, or advantage of fire-arms.

The Eskimos, on the contrary, show considerable skill and intelligence in the construction of their stone huts, weapons, kajaks, sledges, etc., and the taming and control of their dogs are remarkable. They also ap-

peared to express much astonishment and wonder at the sight of Caucasians, and were evidently aware of the superiority of the white man. They exhibited especial delight when shown our fire-arms, many of which were of such a recent and improved mechanism as to have rendered it impossible for them to have ever seen the like before, yet the uses and advantages of which they readily understood and appreciated.

The Eskimos were also excellent mimics both of sound and gesture, and would repeat with accuracy the words and actions of the members of our party. On one occasion Dr. Hughes was wanted, and the natives, about a dozen in number, hearing his name, began mimicing and calling, "Hughes! Hughes! Hughes!" This provoked a laugh, in which they likewise joined, as if also enjoying the joke. Other points of contrast between the Eskimos and Fuegians suggested themselves, but these were the most striking.

A large number of stone-piles in the vicinity of the settlement having attracted our attention, we were informed, by signs, of course, that they contained stores of meat and blubber intended for winter use; others which we saw contained the bodies of departed Eskimos buried as they had died, in full costume.

The ground is continually frozen from a few inches below the surface to the depth of many feet; hence the necessity for this mode of burial. The number of graves observed was much larger than that of the inhabitants of the place.

Being desirous of procuring some skulls and bones to

take home for scientific purposes, we wandered leisurely about these stone-piles, having first managed to have the attention of the natives diverted to another direction by some of our men. Many of the bodies were scarcely hidden, owing to the stones having rolled away, and it looked as though little attention had been paid to these graves since first they were made.

Our search was finally rewarded by the discovery of a body in a partially mummified condition, which had evidently been buried a long time. It was enveloped in a bear-skin garment, parts of which still adhered to the bones. Hastily removing the body from its tomb, we left it lying on the ground beside the pile of stones, for we feared to excite the animosity of the Eskimos by thus despoiling the graves of their ancestors. We found, afterward, that there was not the slightest necessity for our having had any uneasiness on that score, for they themselves cheerfully helped us to discover and carry to the ship skulls and other fragments of mortality. Having successfully avoided their observation, the body was quickly wrapped in an old coat and, thus enveloped, conveyed on board the vessel. Two small models of harpoons and a little sledge were found in the tomb, and it was evident, not less from the care with which the body had been buried than from the size of the bones, that the deceased was a man, and had been, in his time, a person of some importance.

CHAPTER IX.

HERBERT ISLAND.—FOX-TRAPS.—A GREEN SPOT AMONG THE GLACIERS.—MCCORMICK BAY.—CHOOSING A SPOT FOR PEARY'S CAMP.—BUILDING THE HOUSE.—A CLIMB TO THE ICE CAP.

OUR investigations finished, we returned to the ship, which was then headed up Whale Sound. Before Herbert Island was passed it was evident that we could not hope to reach Inglefield Gulf by that channel. The ice had never started from the gulf, and stretched in one vast, unbroken sheet as far as the eye could reach. We therefore altered our course and steered along the edge of the ice to Herbert Island, and, skirting its shores, entered the channel between Herbert and Northumberland Islands to reach Murchinson Sound, which also communicates with Inglefield Gulf. Several stops were made to examine the shores of Herbert Island, which seemed to be more green and attractive than the rest of the land. Quite a number of stone huts and "caches" or stone-piles containing blubber, stored by the Eskimos, were seen, but none of the natives themselves. There must be a number here during the winter, as the quantity of blubber, huts, sledges, etc. found was comparatively large.

In exploring the land in the vicinity we ran across

quite a number of fox-traps; these were the first we had seen, and interested us greatly. They were small rectangular boxes built of stones, having only a single entrance. Over this opening is suspended or balanced,

ESKIMO STONE DWELLINGS.

by means of a leather thong, a slab of stone; to the other end of the thong the bait is fastened, and it is so arranged that a slight pull upon it will cause the slab to fall, thus effectually closing the entrance. The box or cave is so narrow that the fox cannot turn around or burrow out of its stone prison. They all showed signs of having been recently looked after and set, which was regarded as

another evidence that the natives had departed only recently.

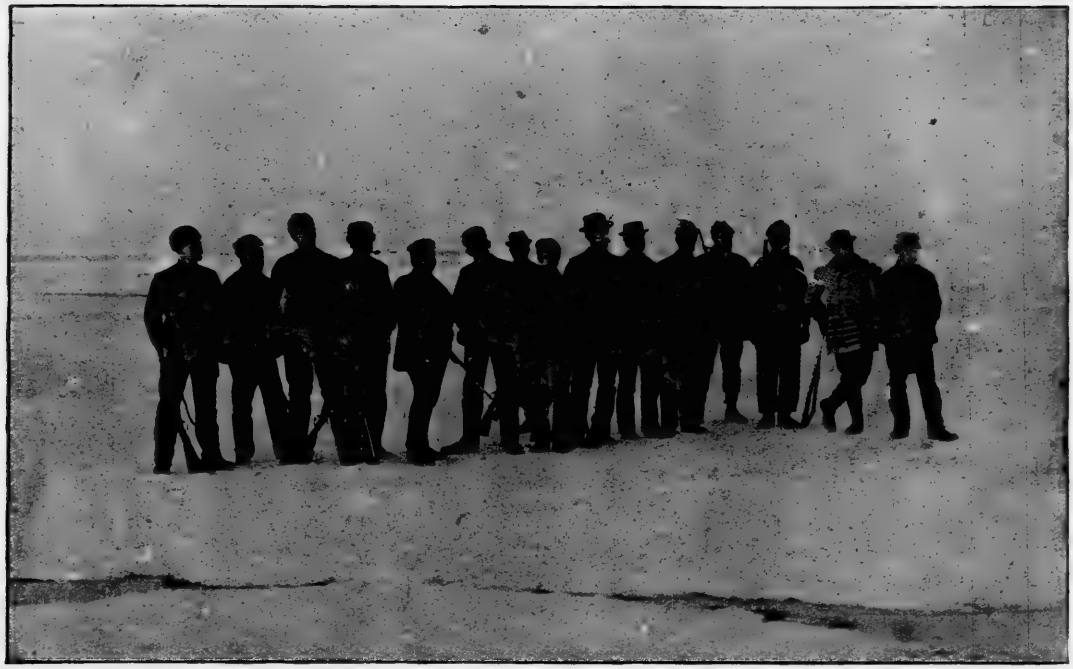
In the vicinity of the huts vegetation flourished. This was probably due to the sheltered location and great quantity of refuse animal matter lying everywhere around. Vegetation, although generally sparse in Greenland, occasionally flourishes with vigor in a few well-sheltered and watered spots. Some grasses of the varieties occurring in temperate climes are occasionally seen growing as high and luxuriantly as at home, and flowers of great delicacy both of form and color are found in profusion in some places. Yellow poppies and dandelions are also met with in considerable numbers; even the butterfly was there, several varieties being captured. Flies which resembled very closely the common house-fly were also seen, but were neither so tormenting nor so numerous as those found in civilized communities. They have not the opportunity to devote such a large amount of their attention to humanity as do those we have at home. The mosquitoes, on the contrary, are quite numerous in Greenland, and were a constant source of annoyance and discomfort. Our heavy clothing protected our bodies, but the faces of many of us were considerably disfigured and rendered quite painful by their attacks.

The scenery was grand and impressive. Glaciers were to be seen at every turn, and the breaking and falling into the sea of large icebergs was frequently witnessed. The noise and vibration caused by this breaking ice were almost the only sounds to be heard in these lonely waters,

and the echoes and reverberations among the solitude of mountains and gorges were productive of a feeling of awe which was perhaps increased by an appreciation of the dreariness of our situation and the knowledge of our distance from any civilized port or assistance. The slightest accident might have delayed our vessel and thereby rendered a return home, for that season at least, impossible, and subjected us to the often told experience of misery and hardships in this far-away and desolate region.

A few weeks only remained of the summer in which to navigate these uncertain and dangerous seas, and then it would be necessary to turn our prow southward.

All the following day was spent by the party sent out from the ship in a boat in searching for a suitable spot on which to build Peary's winter quarters. They found McCormick Bay to be n arm running off from Murchinson Sound in a general north-easterly direction. Its upper part was securely locked in ice, and a great glacier was visible running down at the head. The north-west shore, which was the one first investigated, was reached only after considerable difficulty, on account of the field of ice which stretched out from its sides far into the bay. It was bleak and inhospitable, and no suitable landing-place could be found. The north-east shore, on the other hand, appeared in every way suitable for a camp. A good beach running up to a little bluff about twenty feet high was found, which was continued by a gentle but steadily increasing incline as the ground rose to the rampart of cliffs that marked the edge of the great inland



THE PEARY NORTH GREENLAND AND WEST GREENLAND EXPEDITIONS ON A FLOE.

plateau. The surface from the beach back to the cliffs was covered with a luxuriant growth of flowers. Yellow poppies nodded like daisies in the bright sunlight, purple heaths and other flowers abounded, and once in a while a butterfly would lazily float along in the balmy air. It was very difficult to realize that we were less than seven hundred and fifty miles from the Pole, and within a short distance of the spot where the Kane expedition had spent two miserable winters frozen in the ice.

A pretty flower-covered knoll, rising about twenty fee above high tide and some fifty feet back from the beach, was the site chosen for the camp, and the selection submitted to Lieutenant Peary for his decision. The lieutenant would have preferred a location on the north-west shore, where better protection would have been afforded from severe winds, but he acquiesced in the judgment of his comrades, and the site of his future quarters was formally settled. Now it was that the unfortunate accident which had befallen him was most severely felt, for he could not even see, except by the feeble aid of a mirror held over the skylight, the shores on which he was to make his home.

The next four days were consumed in hard and difficult labor. We were unable to anchor on account of the danger from drifting floes, and were compelled to steam slowly up and down the shore opposite the camp while the stores of the North Greenland party and the material for Peary's house were landed by small boats. This having been accomplished, a foundation

was prepared in the hard, frozen soil, the frame set up, and the building erected.

The situation of the house appeared to every one to be as favorable as could have been selected. A little stream of water ran near at hand, while numerous reindeer-tracks were found and several deer observed at a distance. Two pairs of large antlers were brought on board, having been found among the rocks, as well as the skeleton of a reindeer which was obtained at the base of a high cliff: as many of the bones were broken, it was thought quite probable that the animal had met its death by falling from the rocky heights above. The abundant signs of game in the neighborhood encouraged the hope of it serving in the future as a source of supply of fresh meat should necessity require. No attempt was made during our stay to capture any of these animals, because it was the wish of Lieutenant Peary that they should not be disturbed, as he thought it best to reserve them for possible emergencies later on. The waters abounded in seal and walrus, quite a number being seen during our stay.

The camp, not yet named, was situated on the northeast side of McCormick Bay. This bay is about ten miles long and five miles wide, and forms a well-sheltered and desirable harbor. Its latitude is 77° 43′, but the charts are so defective that it is almost impossible to indicate the exact position of the camp without elaborate surveys. Its present location is to be found by crossing Whale Sound, passing between Herbert and Northumberland Islands, thence across Murchinson Sound to

McCormick Bay, on the shores of which are Lieutenant Peary's quarters. The striking red color of the mountain-side, a mile to the eastward, is a prominent landmark should an attempt be made to find this spot again.

LIEUTENANT PEARY'S CAMP, McCORMICK BAY.

The house being small, one might easily fail to observe it while looking from the bay, but the red mountain-side forms a sufficiently conspicuous object to attract attention. The water in the bay was quite deep, thirteen fathoms being found within a quarter of a mile of the shore—a circumstance that greatly facilitated the unloading of the vessel. We found considerable ice present, but, the south side being comparatively clear, we were enabled to stay without danger until the work on shore

was nearly finished and Lieutenant Peary and his companions were established in comfortable quarters.

On Sunday, July 26th, I went ashore early in the day to explore the high table-land situated back of the newly-established camp. This land rose abruptly from the level of the water to a height of some two thousand feet. From the ship it appeared to be an immense plain among the clouds, and was the only land of such an elevation that we had seen free from snow and ice. I endeavored to induce some of our party to accompany me in its ascent, but as none desired to undertake the climb, I was forced to make it alone. The rise was gradual from the water's edge for the distance of about a mile, when it began to get more difficult and dangerous. Loose earth and rock covered the side of the mountain, and much of the way was necessarily traversed on my hands and knees. The stones and fragments loosened by climbing rolled behind until they reached the bottom of the gorges and chasms hundreds of feet below. The stillness and quiet of the scene were intense, and the awesome feeling produced as one neared the top, after three hours of hard and trying work, was absolutely indescribable. The view from this point was simply magnificent. I was standing on the edge of what appeared to be a limitless plain. For a distance of two or three miles the ground was bare, free from snow and ice, and composed of small pebbles and stones with hardly any earth interspersed. Beyond this, and as far as the eye could reach, was a covering of snow and ice which is known as the "ice cap," and supposed to cover the greater part of Green-

land. No spurs of mountains or elevations of land were noticeable: for the many miles I could see the view presented one great unbroken level of ice and snow. It is only the land bordering the sea that shows the vegetation and holds the animals that have already been described: beyond must be one great solitude. I remained an hour on this vast plain, far from the ship and my companions, and had never experienced a feeling of more utter loneliness and undefinable fear than during this solitary wandering. It was with considerable relief that I arrived once more aboard ship, thoroughly tired and ready for bed, but not, however, without first interesting all the party so much with an account of my trip as to cause many of them to express their intention of accompanying me on another visit to "my plateau."

On the ensuing day the construction of Lieutenant Peary's house was going on rapidly, and as his men, with part of the ship's crew, were ample for the work, the services of the Academy party were not needed.

By ten o'clock the mountain expedition was ready to start, and with a good supply of food and instruments the ascent was begun. The day was a most agreeable one, the cloudless sky and genial sunshine making the temperature seem much higher than was indicated by the thermometer. A light breeze just ruffled the waters of the bay and caused a little surf to beat upon the beach. Mr. Kenealy, Dr. Burk, and myself kept together during the trip, while Drs. Sharp and Hughes, Mr. Mengel, and Professor Heilprin made the ascent from another point. Walking along the shores of the bay, we arrived at a

small ravine where a snow-fed stream came dashing down the mountain. Up this ravine we slowly wended our course, avoiding, as well as we could, the angular boulders with which its sides were strewn. As we advanced a careful watch was kept for a sloping bank by which we might be enabled to escape from the little canyon the stream had carved for itself, and which with every foot became narrower and more precipitous. A grassy slope at length was reached, and with occasional pauses we managed to climb without difficulty to a height of about one thousand feet. The ground up to this point was covered with vegetation of the sparse character seen in Greenland. Above, all was shaly rock which seemed to rise almost perpendicularly. Carefully picking our way, now on a ridge of basalt, now on shaly, slippery rock, we scrambled often on all-fours. The final twenty feet or so of the ascent was most difficult, being made over an outcropping of slate which cracked and splintered whenever touched. It was impossible to secure a safe foothold, and every time one slipped it seemed as if nothing but a miracle would prevent a fall to the depths below. Above the shale was a thick layer of gravel, crossing which our arms were over the edge of the table-land, and the climb was finished.

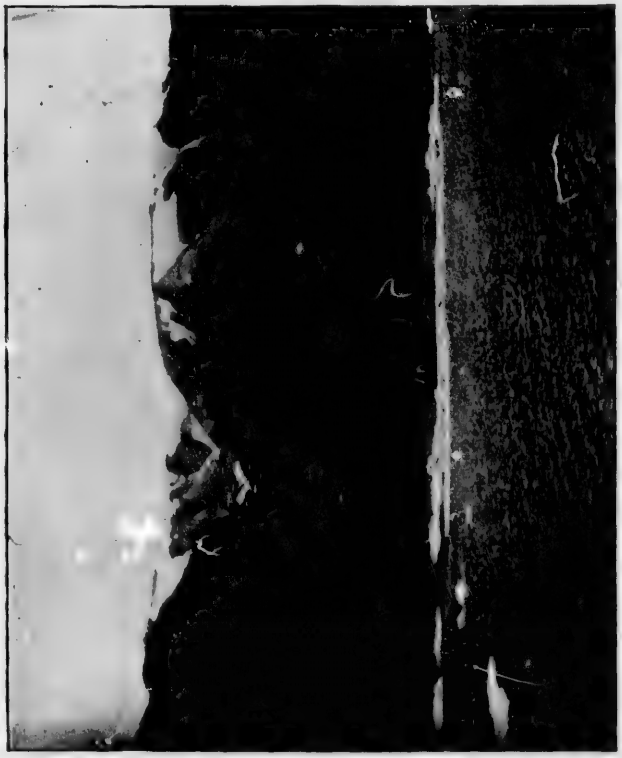
One can hardly describe the peculiar sight which met the eye as our heads rose above the surface of the plain. For over two hours we had been scrambling up the rocky cliffs without encountering a single ledge that was level or secure, yet in an instant we were in full view of an enormous plain, almost perfectly horizontal, and without

a single rock or stone to break its monotony. The place at which we reached the top was free from snow or ice, and, indeed, this was the reason it had been selected. About a mile back was the foot of the great ice cap, which extended, a dazzling expanse of white snow, until its distant border became merged with the sky.

The soil was made up of gravel and small pebbles, while here and there our botanist found little plants, among others the poppy and buttercup. Some of the flowers of the poppy, though evidently of the same species as the yellow ones of the lower levels, were here pure white in color. The buttercup appeared to be of the same species as our own, but was only an inch or two in height. Its leaves and flowers, and even the bulb, were the same as our common crow's-foot, only reproduced in miniature. The pebbles were of many kinds, and had evidently been swept by glacier action from rocks many miles away. Among them were quartz, jasper, and agate, two very pretty moss-agates also being found.

The view from the edge of the cliff, looking out to the sea, was simply magnificent. Directly beneath lay the blue waters of the bay, with our ship, looking like a toy, near the shore; Peary's camp was only a little speck on the landscape, and while we could hardly see the small boats as they passed from the vessel to the shore, yet when eight bells struck on the ship we heard the sound with faint distinctness. Immediately opposite the bay lay Herbert Island with its countless glaciers; just beyond was Northumberland Island, and still further out to sea was the rugged outline of Hakluyt Island, the far-

thest point north reached by Baffin in his famous voyage of 1616. The upper reaches of McCormick Bay were filled with ice, as was also Inglefield Gulf. Away to the south



MOUNTAINS AND TABLE-LAND BACK OF PEARY'S CAMP.

stretched the bold front of Cape Parry, and beyond it the open water of Baffin Bay. From Cape Acland to Cape Parry the view was superb, the blue water being dotted with icebergs of every size, which gleamed in the sun-

light like the sails of ships. The silence which prevailed impressed the others as it had me on the previous ascent, for no bird or animal appeared to break the utter stillness of the scene.

We seated ourselves on the flat ground and remained some time admiring the view, after which we turned inland toward the ice cap. Before reaching it the ground became moist and springy from the numerous streams fed by melting ice, but once upon the snow, all difficulty in walking ceased. We found it hard and compact, and the prospects of easy travelling in the spring for Lieutenant Peary seemed good should he succeed in reaching the ice cap with his stores of provisions. The difficulty we had found in climbing the mountain was probably much greater than what he will be likely to encounter in the early spring, when the glacier fronts, in all probability, will extend far out to sea, and provide a more easy means of ascent than can be obtained by scaling the cliffs.

The ice cap appeared to continue down to two large glaciers which reached to the beach. From the head of these glaciers it was unbroken, and extended inland with a gradual and uniform slope. Professor Heilprin, who advanced on its surface farther than did the others, reached an altitude of 2200 feet. At the edge of the cliff the height was 1950 feet.

A short sojourn on the ice satisfied our curiosity, and we returned by the same route taken in going up. The descent, for muscles unused for weeks to such violent exertions, was even more painful than had been the ascent.

The only signs of animal life which any of our party found on these desolate heights were a reindeer-track and a few tufts of fox-hair. The sparse vegetation can be but little attractive to either bird or beast, and during the greater part of the year the entire plateau must be covered with snow and ice.

A few hours' rest on board the ship prepared us for further adventure. Great flocks of guillemots and little auks were flying constantly overhead, and the temptation to shoot at them was almost irresistible. Lieutenant Peary, however, did not wish us to fire in the vicinity of the camp, lest the game should be frightened off; but in one of the ship's boats we easily reached a spot, some distance away, where there was no danger of the shooting doing any mischief, and where great flocks of birds were constantly passing. Our luck was only fairly good, though occasionally three or four birds would fall at a single shot. Their number was almost incalculable, passing all day long in flocks or in continuous streams over the ship. They flew with a steady, rapid flight, and furnished excellent sport, but their plumage was so dense that many which were struck by the shot escaped uninjured.

Later in the evening another party went to the entrance of McCormick Bay, and here had excellent sport, returning with large numbers of the birds. The majority of these were little auks, but there were also many black guillemots.

CHAPTER X.

A School of White Whales.—Bidding Good-by to the Peary Party.—An Arctic Storm.—Growlers.—Saunders Island.—Southward Bound.—Crimson Cliffs.—Red Snow.—The Cape York Natives.—An Eskimo Tailor.

THE days passed rapidly in these pleasant surroundings. The naturalists investigated the adjacent shores, and brought back to the ship many interesting specimens of birds' eggs, insects, and plants. Prof. Sharp dragged the bay, and obtained some rather curious forms of marine life, among others a small fish provided with a sucking arrangement, evidently for the purpose of attaching itself to other objects. The water teemed with small red shrimps, which constituted the principal food for the multitude of birds.

The work of unloading the ship still went on, and as everything had to be taken ashore in small boats, it was both tedious and troublesome. Wednesday dawned cold and unpleasant, and the snow, which fell the greater part of the day, rendered the decks wet and disagreeable. In the evening we were treated to the unusual sight of a school of white whales. They were the first we had seen, and as they came quite near the ship, we had ample opportunity to observe them carefully. They

remained near us for about half an hour, and their playful and sportive actions afforded considerable amusement.

The sixth day of our stay in McCormick Bay was so foggy that only at occasional intervals were we able to see the shore, a quarter of a mile distant. The house having been so far completed as to render a longer stay unnecessary, it was proposed to start on the homeward trip that night, provided the weather cleared sufficiently to enable us to see our way. The fog, however, continued through the night, but lifted at 5.30 the following morning. We were all called at this hour to bid good-by to Peary's party. Of the Peary expedition all except the lieutenant and his wife had stayed aboard, so as to write letters for us to take home for them. We had become greatly attached to one another, having lived so intimately together for two months as one expedition, and the parting, possibly for ever, although not demonstrative, was painful to all. While some were to remain in a desolate and unknown region that is only within reach of civilization for a few short weeks during the year, the others, after their severe experience in forcing a passage northward, were to undergo a perhaps still more dangerous voyage to their native land.

It made us all sad and thoughtful, and after exchanging a few souvenirs and well-wishes we bade each other good-by. Three shrill blasts of the whistle and a volley from our guns signalized our departure. Never had I listened to a farewell salute that affected me so sadly, showing the different effect produced by the strangeness of our surroundings and the peculiarity of the circum-

stances. As their boat rowed off they gave three cheers, but not with the hearty ring that I had heard from the same throats before. The signal-bell in the engine-room rang full speed ahead, and in a few minutes we departed from the most northern white settlement on the globe, leaving our companions to face their chosen duty in that almost merciless Arctic climate.

Our course south was again by Murchinson Sound and between Herbert and Northumberland Islands. The wind, which had been increasing, soon turned into a gale, and by noon a storm was fairly upon us. It kept getting worse, and, anticipating trouble, everything about the vessel was made snug; as the barometer continued to fall, we ran the ship under the lee of the mainland, hoping to escape some of the fury of the storm. In one hour the wind had risen to almost hurricane force, and the water was lashed into such foam and spray that it was impossible to see more than a couple of ship-lengths ahead. Occasionally, through a break in the mist, the ice-covered cliffs of Cape Powlet could be seen, when was to be had a view of the wildest and most magnificent grandeur. The fearful grinding and clashing of colliding bergs, the tumultuous sea, lashed to its utmost fury, and the screeching and roaring of the mighty wind combined to produce an impression never to be forgotten.

Such experiences, with the strangeness of our surroundings, so different from those to which we had been accustomed, needed but little more to convince us that we were on another planet. So terrific was the force of the gale that the stay-sail was blown from its gaskets, and

the engines, although going at full speed, were not always able to keep the ship's head to the wind, even with the aid of the most careful manœuvring. Several times we were driven toward the lee shore, which was known to be less than a mile away. The thickness of the weather added much to our anxiety. Every few minutes a gigantic iceberg would loom like a spectre through the mist, sometimes coming within a few yards of us, and making as serious and horrible a situation as can well be imagined. The frightful howling and screaming of the winds through these lonely fiords could not be conceived by the most vivid imagination. The deafening roar of crashing ice and colliding bergs added to the experiences of this frightful day, and the fragments and débris increased our consternation by pounding against the ship's sides. The huge fragments of ice became so abundant later as to have a very perceptible effect in subduing the force of the waves, and thus allowed the ship to ride more easily; but the storm continued with unabated fury, the wind still came with hurricane force, and it was not until evening that the weather cleared sufficiently for us to see our dangerous proximity to the rocky coast of Northumberland Island. An effort was now made to get under the lee of Cape Powlet, but although we were able to get quite near, the force of the wind would not allow us to hold our position, and after three hours of hard work we were driven out to sea.

The danger from the ice was now greatly increased, as the sea was filled with the broken fragments of ice-

bergs, forming what the sailors know as "growlers." These are large, water-logged masses of ice, ground by attrition with other ice and bergs into a roughly spherical form. They rise and fall with the waves, often disappearing beneath the surface, and constitute one of the most dangerous forms of ice found in Northern seas. As they rise the water rushes from their sides back into the sea, producing a roaring or growling sound which can be heard quite a distance off; hence the name "growler." One rose directly in front of the vessel, but fortunately struck the ship slantingly on her bows. Had it risen beneath the hull, she would almost inevitably have foundered. At last, however, the wind seemed to moderate, and, the barometer beginning to indicate better weather, we were able to keep on our course to Saunders Island, which now became visible. On our way toward it we passed Fitzgerald's Rock, a bell-shaped projection which had attracted our attention on the passage up. It had been our intention to stop on the voyage homeward, but the sea, which was rolling high, and the still heavy wind made a landing impossible. Indeed, we had little desire to attempt it, for the dark and cloudy sky had cast such a gloom over everything as to dampen all ardor for new explorations. The next day found us at Saunders Island, whither we had come for birds and with the hope of finding Eskimo relics. We circumnavigated the island, looking for a safe landing-place, which was finally found; but the wind, having again increased to almost a gale, made it impossible to get ashore in safety, so the ship was run under the lee of the island, the cliffs

of which rose abruptly from the water's edge to the height of many hundred feet.

Myriads of birds had their nests on the face of these cliffs, and a rifle-bullet sent to these otherwise inaccessible heights startled so many birds as to almost darken the sky as they rose in the air and left their lofty homes in flight. The sides of the rocks were about two miles long and so covered with nests and birds as to give to them a characteristic color. It was our hope that on the morrow an opportunity would be afforded us of going ashore and having a close view of this interesting island, the appearance of which from the ship was very picturesque. On its southern side a large and beautiful cascade was seen falling from a dizzy height to the sea below, and the patches of green near the falling waters showed the beneficent influence of fresh water and sunlight. This rich harvest of strange mosses and lichens waiting to be gathered made our botanist especially anxious to get ashore. The wind was blowing so hard that Captain Pike endeavored to make the ship fast to an iceberg which was thought to be firmly grounded; but the sailors, who had taken our hawser in a small boat, had hardly reached it when it was found to be moving, and they were nearly crushed between the berg and the vessel. It was only by the most strenuous exertions that the boat escaped and they were saved.

Anchorage was finally found in fifteen fathoms of water, but the bottom being smooth rock, the anchor did not hold the ship well against the heavy wind, and we shifted our position several times during the night. An-

SAUNDERS ISLAND.

other day was passed lying to under the lee of Saunders Island with the wind still blowing a gale, and this time we changed our location but little, as, with the aid of our anchors and the use of steam during the hardest blows, we managed to keep under the high cliffs, which continued to afford some shelter. The squalls, which followed one another in quick succession, were most fearful and violent, and the few moments of intervening calm seemed only given to enable the gale to increase its strength in its efforts to overwhelm us. The wind, which had blown with almost unabated fury for the last four days, at last began to moderate, and late at night, by steaming close under the cliffs, we were enabled to approach near enough to shore to enter comparatively smooth water and make a landing in a small boat.

One end of the island was flat, and there it was that we found some signs of Eskimo life. There were several unoccupied stone huts, a sledge, the framework of a kajak, some old pieces of iron and bone tools, and a few other evidences of the place having been used recently as a camp by natives. There were also some stone graves containing a few scattered bones, but nothing that indicated that there had been any recent burials. After completing our investigations we returned to the ship and once more started on our journey southward. The next day, August 2d, was rainy and thick, much of the grand and lofty scenery which characterized this part of the voyage being but dimly visible through the fog and mist—a fact greatly regretted by all. Our run was made close to the land, as the sea further out was filled with

ice. Several large glaciers, which had been seen on our northward journey only at a distance, were now observed at close range. Their immense extent readily explained the origin of the great number and size of the icebergs everywhere visible. The famous Conical Rock, a curious basaltic formation described long ago by Captain Ross, was passed, and we were soon under the lee of Cape York, whose "crimson cliffs" gleamed in the occasional bursts of sunlight.

These crimson cliffs did not appear by any means so highly colored as we had expected to see them, but they presented nevertheless an altogether unique appearance, as everywhere else in Northern Greenland the rocky cliffs, rising abruptly from the sea, exhibit the familiar stratified formation of sandstone rock. Instead, however, of being of the uniform dull-brown color commonly seen in this latitude, they were of a tawny reddish hue. Opinions differed as to the cause of this peculiarity. Some of the party believed that it was due simply to a different colored sandstone, but the botanist claimed that it was caused by the great masses of an orange-colored lichen which grew everywhere in abundance.

Patches of the red snow peculiar to the Arctic regions were observed on the glaciers and in the shady nooks of the ice, but its color was wholly different from that of the curious cliffs mentioned above. Later, we had an opportunity of gathering and examining some of this red snow, which occurs in patches and exists only on the surface: an inch below, the snow was as pure a white as that found anywhere. The color was not uniform

even on the surface, but occurred in streaks. On closer examination it was found to exist in the little crystals of snow which composed the surface, and even in these the tint was not the same throughout, but radiated from centres. When the snow was melted it formed a bright-red liquid about the shade of claret punch, and on standing the coloring matter gradually settled to the bottom as a deep red sediment, which, under the microscope, proved to be composed of a minute-celled plant, the *protococcus nivalis*. So intense is its color that even under a power of four hundred diameters, which causes a red corpuscle of the blood to appear almost colorless, it was still of a brilliant red hue.

Twelve miles below the cape several skin tents of natives were indistinctly seen through the fog. Soon the sound of "Ki-mo" was heard repeatedly, coming from the shore. This is the cry by which the Eskimos greet the arrival of a ship, and in a few minutes the natives were seen coming toward us over the ice, some on foot, and others with sledges and dogs. Their peculiar attire and various antics expressing delight presented a most interesting spectacle. The ship was made fast to the ice, which reached some distance from the shore; but even before we had our ice-anchors firmly inserted the natives were climbing over the sides. As soon as the ship was properly secured some of our party, including myself, went off on the ice. This, although quite thick and heavy, was rough and much broken up, with seams of water running in all directions. While the ship was approaching the shore the tents

which we had descried through the fog again came into view. They were at that time so far off as to be scarcely distinguishable from the many peculiarly-shaped rocks

CAPE YORK.

which constitute the mountain-sides in the vicinity of the cape; it was toward these tents that our course was directed.

We had scarcely left the vessel when some of the na-

tives on board noticed that we were going in the direction of their village, and one of them was soon over the side and hastening after us. Seeing that he wished to accompany us, we stopped and awaited him, as it was evident from his manner that he was unwilling for us to venture across alone. We were only too glad to have him join us, as travelling over the broken and fissured ice was both difficult and dangerous. He proved to be a most merry little fellow, and with him acting as guide we were able to progress more rapidly and with greater safety than we would have been able to do if left to ourselves. He would run ahead, jumping from one cake of ice to another with the greatest ease and agility, stopping only when one of us would get a fall or a foot wet in the water which was lying here and there in pools on the surface of the ice; then he would evince his amusement at our discomfiture by giving way to most hearty laughter. Clad as we were in heavy overcoats and long boots, we must indeed have presented an awkward spectacle in our endeavors to keep up with our nimble companion; however, under his guidance we soon reached the shore.

The native village was found to be situated about a quarter of a mile from the water's edge, up the side of the mountain. There was no path, and we had to climb over and around the large rocks and boulders with which the ground was everywhere covered. This was even a more difficult and laborious undertaking than our passage over the ice. The rocks, being wet from the rain and fog and covered with lichens, were very slippery, and,

encumbered as we were by heavy clothing, our progress was necessarily slow.

Arriving at last at the village, we found it much more extensive than the one already seen farther north. It consisted of about a dozen skin or summer houses and twenty stone huts, used only in winter. The village was situated on very rough ground, the tents being erected wherever space enough for them could be found between the boulders. They were rather close together, but the stone huts, on the contrary, being built wherever a favorable spot could be found, were more scattered, most of them being near to the sea.

The place was practically deserted, the inhabitants having gone off to our ship. A few women, children, and dogs were all that greeted our arrival; they seemed greatly astonished at such an unexpected visit, and were evidently somewhat alarmed. The younger children showed their fear by crying and clinging closely to their mothers. A few presents of needles soon assured the women of our friendliness, and at once caused peace to reign. On looking around dirt and refuse were, as usual, found to be everywhere present. The bones and partly-consumed carcasses of walruses, narwhals, and seals were scattered indiscriminately about. The water from the melting snow of the mountains trickled through the village, and with the little snow between the rocks and the omnipresent filth made the walking disagreeable enough.

We separated, and wandered through the place looking into tents and seeing what we could. Peeping into

one of them, I saw a woman diligently employed in cutting and sewing skins. Strewn all about the interior

ESKIMO BONE NEEDLE, TWO-THIRDS ACTUAL SIZE.

were furs and sewing implements, so it appeared evident that I had found a tailor. Although the clothing of all of us needed repairs and considerable patching, I especially was suffering for a new pair of trousers. Here appeared to be a chance not to be lost, so negotiations were at once opened with the lady for their manufacture by presenting her with a knife. It was not without considerable difficulty that I succeeded in conveying to her an approximate idea of the style of article desired, as I wished them to reach to the feet instead of only just below the knee, as was "a la mode" at Cape York. That much was at last accomplished, but the addition of pockets being beyond her powers of comprehension, I was compelled to forego those luxuries.

The question of style having been decided, she proceeded to take my measure. This was done in a rather novel manner. Having selected a seal-skin of sufficient length and width from a pile in one corner of the tent, it was wrapped around the limb, the fur side being placed inward; the surplus material was then bent over with the fingers and the skin removed. The crease so formed served as a guide for the next procedure, which consisted in biting along the line with the teeth so as to cause the fold to lie flat. This being accomplished, it

was again applied to the limb and a few slight alterations marked with an additional bite here and there. The shape having been outlined, the skin was again removed, and the lines thus marked being followed with a rudely-made knife, the cutting of the trousers was completed.

With the object of facilitating the work, I offered her the use of a pair of scissors which I had brought with me from the ship, but, being entirely unfamiliar with their use, she preferred her own knife, and, seeing I was only delaying operations, I ventured to make no more suggestions. Desiring to hasten their manufacture, I gave her a few additional needles, but soon found that Eskimo character resembled in some respects that existing in more temperate zones, and that it was not always good policy to pay in advance. Instead of working faster, my tailor lagged still more; indeed, so little progress was made, and so evident was it that she was only endeavoring to extort additional pay from me, that, appreciating my mistake, and despairing of getting my much-needed article of clothing completed, I decided on taking them away as they were.

Just at this moment I was discovered by some of my companions from the *Kite*, and, as they were about returning to the ship, I got ready to accompany them. Taking the unfinished trousers away from the woman, who parted with them reluctantly, we started off. We had not gone far when we saw that she was following us, appearing to regret her unseemly behavior and wishing to make amends. The ship was soon reached, and, finding the decks full of natives, I at once contracted with

A GROUP OF CAPE YORK ESKIMOS.

some to have the work completed on board. Several women began on them, and as soon as my back was turned my original tailor joined the group. By the laughter which soon arose I was convinced that they appreciated the true state of affairs and were amused at her discomfiture. The trousers were soon finished, and I wore them until our return south necessitated a change to more civilized attire.

As many as fifty Eskimos had come to visit us, some on foot, and others with dogs and sledges. They brought along many articles to trade; indeed, they seemed to have with them almost everything they possessed, even to the toys of their children.

Our visitors were of all ages, sizes, and conditions, including the babies, who gazed on the strange sights with wonder and interest. Some of them were not over a month or two old, being carried on their mothers' backs. Their cute little faces and bright black eyes peering out from their odd resting-place made quite an interesting picture. Many of the smaller children were observed munching away with great avidity on raw birds which had been given to them by the sailors, and exhibiting as much pleasure as the civilized child would experience in eating cakes and candy. After consuming the bird they invariably rubbed the fatty skin over their faces; this they are taught to do at an early age, as the coating of grease so applied serves to render the exposed skin less sensitive and protects it from the extreme cold of winter. Some of them presented, indeed, a most ludicrous appearance owing to

the feathers which remained on the face after the completion of this procedure.

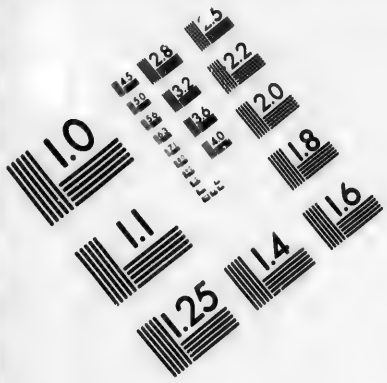
The adult portion of our visitors wandered about the ship at their pleasure, looking into every nook and corner and exhibiting the utmost curiosity. They were so good-natured, harmless, and childlike in their manner that it was a pleasure to show them whatever we could. They were much delighted in looking at themselves in a mirror, and a pair of blue-glass spectacles loaned to one of them were not returned until they had been passed from hand to hand and each had had a look through them.

CHAPTER XI.

ARCTIC CLOTHING.—A SLEDGE-RIDE.—AN INDIGNANT ESKIMO LADY.—THE NATIVE DOGS.—SLEDGES.

THERE being such a large number of natives on the ship, an excellent opportunity was afforded us of observing the peculiar character of their clothing and learning how they protected themselves from the rigors of their climate. The mode of dress in both sexes was much alike, and consisted of a jacket, trousers, and boots. These were made either of the skin of the bear, seal, dog, or reindeer, and often a combination of all. Seal is the most frequently used, the others being less common. The jacket covers the body from the waist up, and terminates in a hood which covers the head, but leaves a part of the face exposed. This jacket is made in the form of a single piece, and is put on by being brought down over the head; no buttons or other fastenings are used except when mittens are worn, which are tied around at the wrists. The hood fits closely to the side of the face, only leaving the latter exposed from the forehead to the chin.

The trousers reach from the waist to the calf of the leg, and have two openings a few inches long in the sides, which are closed by means of a cord. The boots are always made double, the inner part being the skin of some long-haired animal, such as the bear or dog, with the fur turned inward, and the outer of seal-skin



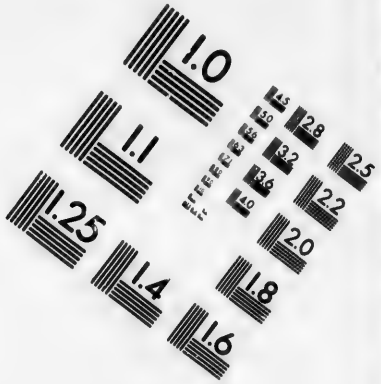
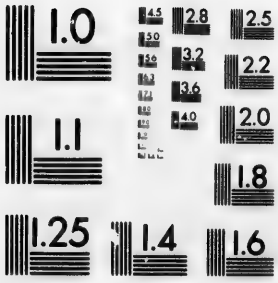
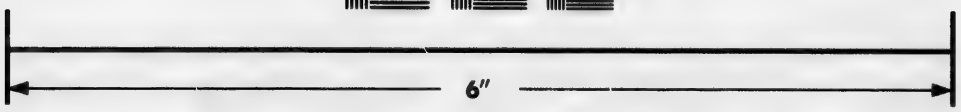
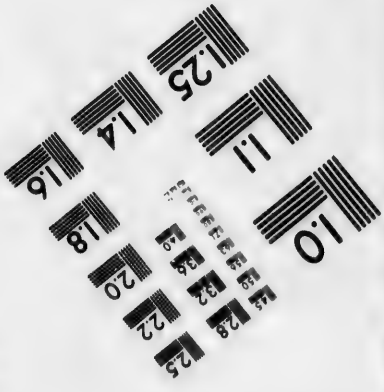


IMAGE EVALUATION TEST TARGET (MT-3)







Photographic Sciences Corporation

23 WEST MAIN STREET
WEBSTER, N.Y. 14580
(716) 872-4503

with the hair removed. They are drawn up over the lower end of the trousers and bound firmly about the calf of the leg with leather thongs, thus making the costume water-tight up to the waist. Underneath this outer suit there was worn, by some, an under-jacket, likewise extending to the waist, but without the hood. This was made of bird-skins sewn together, and worn with the feathers next to the skin. The jacket and trousers just about met at the waist; indeed, so slightly protected was this part of the body that in bending over the bare skin was frequently exposed.

The hands are protected by mittens made of dog-skin. These are not very long, but sufficiently so to go up under the end of the sleeves of the jacket, the point of meeting being made more secure by binding with a strip of skin.

The only difference in the costumes of the women and men was in the jacket. In the former the hood was made somewhat higher in order to accommodate their hair, and a few possessed, in addition, a pouch on the back in which the infants were placed and so carried around. Some of these pouches had an opening cut in them, so that the child could rest in contact with the bare skin of its mother, and in that way obtain additional warmth. The child, usually naked, is placed in the pouch and packed around with fur and feathers. When the mother desires to take the baby out, she stoops forward, bends her head well down, and gives her body a shake. This starts the infant from the pouch, and the mother, raising her hands over her shoulder, draws it forth.

The jacket and hood, being made in a single piece, are so rigid and fit so tightly that it is almost impossible to turn the head without moving the body. When it is desired to look in any particular direction, they turn around with a stiff, awkward movement until the object is brought within view. The fur clothing, being made of skins that are rather hard when cured and not perfectly pliable, prevents their moving with that freedom which is possible with other people. This gives to their movements a stiff and automatic character, which at first sight appears quite droll, and strongly reminds one of the actions of the puppets seen at shows given for the amusement of children. The small size of the Eskimo as compared to the average European also adds to the effect and tends to enhance the resemblance.

ESKIMO BOY.

The natives were continually going backward and forward from the vessel to the shore, bringing things for trade. It was during one of these trips that I was enabled to enjoy the novelty and pleasure of a sledge-ride, Eskimo fashion. For a few trinkets a native placed himself, his sledge, and his dogs at my disposal. I had hardly seated myself on the furs with which the sledge was covered, and indicated that I was ready to start,

when the Eskimo's wife, who had been left on the ship, came out on the ice after us. She showed at once her displeasure at our breach of etiquette in deserting her, and evidently wished to go along. The Eskimo demurred, and seemed anxious to know what my wishes were in the matter. Noticing the woman's determination, and not wishing to lose my ride (besides being the cause of domestic difficulty), I gallantly intimated by signs my consent and even pleasure at the lady's company. In the mean time, while they were wrangling with each other, the dogs had taken advantage of the delay thus caused, and started a fight amongst themselves, getting their harness so tangled up that it required some time to put the team in running order again. Finally, Mrs. Eskimo and myself got properly seated on the sledge, and the dogs were started off at a lively trot, the driver running alongside. He controlled and guided the dogs with such skill as to keep a uniform tension on the traces, and occasionally, as the team increased its speed, would jump on the back part of the sledge and ride until some rough ice or a strip of water interfered with our progress.

Not infrequently the dogs would jump over a crack in the ice, and before the sledge could be stopped it would bring up against the opposite side with such a sudden jar as to throw one from the seat. On such occasions the driver would lift the front of the sledge, and, with a few cracks of the whip, again proceed onward. When a fissure was too large to be crossed in this manner, he would follow along its side until a narrower place was

found, over which the sledge was pushed, one end being allowed to rest on the ice on each side. By this means a bridge was formed over which both ourselves and dogs crossed in safety. The Eskimo dogs appear to have a great dislike for water, and would not attempt the crossing of any cracks so wide as to expose them to the risk of falling in.

As we began to encounter much loose and broken ice, and the travelling was very rough, I requested my guide to return to the ship. We were soon speeding along over a more regular surface, the smooth gliding homeward in the cold, bracing air being most exhilarating. By this time Madam Eskimo had quite regained her temper, and assisted her husband by yelling their peculiar cry, "Ka! ka!" at the dogs, which seemed to incite them on and kept them moving at a lively pace. Upon our arrival at the vessel the driver at once proceeded to cut a couple of holes in the ice, close together and meeting at the bottom; the traces were then passed through from one to the other and tied on top. The team having been safely secured in this manner, we went on board; the dogs howled dismally at being so unceremoniously deserted, but the unheeding driver and his spouse were soon on deck mingling with the others.

The Eskimo dogs are about two feet in height, and resemble more the wolf than the domestic dog of our country. Their hair is long, coarse, and oily, and the head resembles that of the Pomeranian or spitz dog, the snout being pointed and the ears erect. Their legs are quite sturdy and thick, the body compact and strong, and

the bushy tail is carried curled over the back. In color they are principally reddish or yellowish brown; black was exceptional, while white was more common, but not so generally met with as the color first mentioned.

There seemed to be a difference in type between the dogs used in the south of Greenland and those found with the wild natives of the North, these latter being smaller and more wolfish looking, although possessing the same general characteristics. The Eskimo dogs are wild-looking animals, and have a cowardly, sneaking expression, which is no doubt largely due to their half-starved condition and the indifference and harshness of their masters. It is only when employed in drawing the sledges that they are given food in any quantity, and the hungry creatures about the native camps are continually howling and fighting among themselves. They subsist on the blubber, meat, and animal refuse given to them by the natives, and at no time would they touch the salt meat, bread, or biscuit thrown them from the ship. Their fur is much used by the natives for clothing. They are harnessed to the sledges by means of a leather collar to which is attached a line, generally of walrus-hide, about fifteen or twenty feet in length. These lines, one from each dog, are fastened to a heavy thong of skin between the runners of the sledge. Five to eight dogs usually constitute a team. They travel side by side, being guided only by the voice of the driver and the occasional lashings of a whip which is so long and wielded with such dexterity as to make them pursue any desired course.

The sledges are from six to eight feet in length and

about two in width, the runners being eight inches high and made up of fragments of wood and bone tightly bound together with strips of skin. Wood is so scarce that even the smallest pieces obtainable are utilized, thus causing the sledges to look like mere patchwork. The runners are shod with pieces of walrus-tusks about a foot long, which are bound to each other and to the runner with thongs of hide. These thongs are passed through holes in the ivory and countersunk to avoid being worn out in passing through the snow.

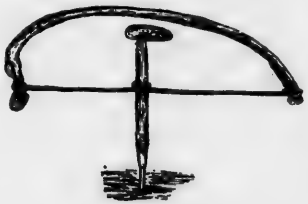
The top of the sledge is composed of pieces of wood, and occasionally of bone, passing across from one runner to the other, tightly bound together. These pieces are not placed close to one another, but at intervals of six or eight inches. At the rear end of the sledge are two uprights, about two and one-half feet high, connected by

SLEDGE.

a cross-piece, the whole forming a handle which is used to guide the sledge at times, and also to lift it over obstructions. Coming from beneath its front, and fastened to the inner sides of the runners, about a foot from their

ends, is a piece of thick strong skin. It is to this that the harness of the dogs is attached when travelling.

The whole of the sledge is apt to be so covered with dirt and grease as to almost conceal its method of construction. Those which we saw all appeared to be very old, and had evidently descended from previous generations. Here and there, in some of them, were noticed pieces which had been inserted recently. When a sledge begins to show the effects of the hard usage to which it has been subjected, it does not break up all at once, but rather gives out in some particular place. This spot is then mended, either by a new piece being inserted or by being rebound with thongs, and the sledge thus enters on a new lease of life. The ease with which repairs can be made obviates the necessity of building new sledges, and, consequently, after one has been constructed, it lasts almost for ever. Notwithstanding their clumsy and ungainly appearance, they glide over the ice quite readily, the ivory runners offering but little resistance. While solidly constructed, they nevertheless possess sufficient give and elasticity to yield to the jolting experienced in travelling over rough and uneven ice, thus making riding in them comfortable.



NATIVE DRILL.

CHAPTER XII.

BOWS AND ARROWS.—SPEARS AND HARPOONS.—HUNTING THE SEAL AND WALRUS.—SCARCITY OF WOOD.—CHILDREN'S TOYS.—MICKEY AND HIS DOINGS.

UNTIL our visit to these most northern Eskimos no one had ever observed them to possess either boats of any description or bows and arrows; but among the natives of Whale Sound we found a couple of kajaks, and also a few bows and arrows.

They were similar in form and construction to some which we afterward saw lower down, at Cape York. The kajaks were of about the same size as those of the

KAJAK AND PADDLE, WHALE SOUND.

Eskimos in the neighborhood of the Danish settlements, but were neither so neatly nor so well made, being both more clumsy and heavier. The skins of which they were built did not appear to have been so carefully prepared as those used by the more southern natives, the hair often being allowed to remain on them in places. The seams also were neither so regular nor so nicely sewn, this being probably due to the fact that bone

needles were used, instead of steel ones. These latter must have been quite rare among them, if, indeed, they possessed any at all, although even the natives of Whale Sound, when we gave them some, appeared to recognize and understand their use.

The bows which were obtained from the natives are quite peculiar both as regards the materials of which they are made and their method of construction. They are composed, usually, of three large and four small pieces of bone, bound firmly together with an animal material resembling catgut. The large bones are the ribs of the reindeer, three being used in order to make a bow of sufficient length. These are placed end to end, the adjoining surfaces being cut off square, and not overlapping. The two extremities of the middle piece thus simply rest against the inner ends of the other two bones, the point of junction being strengthened by means of a thick piece of bone, about two inches long, below, and a thin strip, about four inches long, above. The whole joint is then tightly wrapped with thongs. Run-

BOWS.

ning from one end of the bow to the other, and stretched tightly over the back, are a number of thongs, which in the finer bows are made of plaited strands; one of them

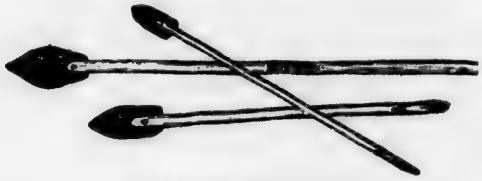
had fifteen of these bound to the bone with the same material at intervals of three or four inches. In the commoner bows the material used for binding and strengthening them is much coarser, and evidently consists of strips of some kind of skin ; one of the number had only three such cords, and even those were thick, and not plaited. Another one possessed, besides the usual number of pieces, three additional ones. One was a long, thin piece of bone, and the others two thin strips of a soft wood resembling pine. This shows the ignorance of the people concerning the properties of various kinds of wood, because the use of so soft a wood for the purpose of strengthening the bow could have been of no service whatever. These bows are about two feet and a half long, quite elastic, and serve their purpose fairly well.

The arrows are between a foot and a half and two feet in length, and composed of a shaft of white pine wood with a point of iron. The shaft was rather thick

BOW-CASE AND QUIVER.

and clumsy, and not infrequently, on account of the scarcity of wood of all kinds, made of two or three separate pieces of wood or bone, joined together by being

bevelled, overlapped, and wound with a fine animal fibre. The part of the shaft that received the bow-string was flattened, and against the side of one of the arrows was bound a single small feather, which, however, could



ARROWS WITH BONE SHAFTS.

have been of little or no service in guiding its flight. The presence of this feather was the only indication of the natives having any knowledge of their use in steadying an arrow on its course, and is strongly suggestive of the bow and arrow being employed only at short range. The points were made of iron or ivory from

ARROWS SHOWING THE SPLICING OF THE SHAFT AND A SINGLE SMALL FEATHER.

three to five inches long and shaped like a spear-head. How, in the absence of any suitable means of heating the iron, these arrow-heads were fashioned was a mystery to us.

On examining the bundle of arrows which were obtained from the natives at Cape York, my attention was attracted by one which appeared to have some letters upon

it. On scraping away the rust and dirt I was astonished to see the words "Dr. Hayes, Ex. 1860," plainly stamped in the iron. Owing to our inability to understand or

ARROW-HEAD FROM THE HAYES EXPEDITION OF 1860, ONE-FOURTH ACTUAL SIZE.

communicate with the natives, we could not obtain any history of this most interesting relic, nor any information as to how it came into their possession. The care with which they treasure iron can be appreciated when we remember that they must have had this piece for over thirty years. It had probably been made, originally, from an old knife or other ship's article which had been marked with the explorer's name.

Their most useful hunting implements are spears or lances and harpoons. The former, as compared to the

SPEAR OR LANCE.

latter, are simple in construction, consisting of a wooden shaft with an ivory point tipped with iron. The shaft, on account of the scarcity of wood, is sometimes made up of several short pieces spliced together with the skill for which the Eskimos are noted. It is shod at its extremity with a little cap or block of ivory strongly secured

by thongs of walrus-skin. This cap has on its upper surface an oval-shaped hollow or depression in which the base of the ivory point rests. The ivory point is from six to eighteen inches in length; at its base it is about three-quarters of an inch by an inch and a half in size, and tapers slightly to the point, which is usually provided with a leaf-shaped (not barbed) piece of iron. The base is rounded in an oval manner with a flat edge, and fits into the depression or socket in the ivory cap.

SPEAR-POINT, ABOUT ONE-SIXTH ACTUAL SIZE.

The Disko spears, on the contrary, have the socket in the base of the ivory point. Two strong thongs of walrus-hide pass from the point to the cap, binding them firmly together. When the spear is thrust into an animal, the point slips off the shaft, but still remains connected with it by the two thongs of skin. In this way the wooden handle is prevented from being broken by any sudden movement the animal may make.

SPEAR FOR SMALL ANIMALS, ONE-HALF ACTUAL SIZE.

The harpoon is a much more intricate weapon. It is, indeed, remarkable how a race so low in the scale of development as the Eskimos could have devised such an ingenious implement. In many respects it is unique,

and supasses in efficiency even the sword-fisher's iron, which it greatly resembles. In ingenuity and adaptability for the purposes to which it is put it is, perhaps, the best that any savage or even semi-civilized race has produced. It has evidently been evolved from the spear just described, but is designed for throwing, and not for spearing. The whole apparatus consists of several distinct parts, which may be described separately. They are the harpoon itself, the harpoon-line, and the float-

HARPOON OF THE MOST NORTHERN ESKIMOS.

bag, corresponding to the wooden cask of the sword-fisher.

The harpoon is made up of a shaft and point differing in no material respect from the spear already described. The point is somewhat rounder and attached to the shaft by the means already detailed, but is blunt at its extremity. To it is added an extra detachable tip, almost invariably shod with iron. The iron is usually a piece of knife-blade, an old hoop, or other fragment which has by chance fallen into the possession of the Eskimo. This is ground with infinite labor to a point and firmly riveted in a slit in the ivory. The point of the harpoon fits into a hole in the back of the tip, the ivory being cut away from one of its sides in such a manner that if the shaft is bent over on one side, the tip comes off, but if pressed to the opposite side, the whole ivory tip can be manipulated as a single piece. To this tip the

line is fastened through the hole in the ivory, as shown in the illustration.

The line, which is very strong, is almost always a single piece of walrus-hide, obtained by making, with great care, a spiral cut commencing at the neck and end-

HARPOON-TIPS, CAPE YORK.

ing near the hind flippers. This strip, frequently one hundred feet in length, is then twisted and worked in blubber oil until perfectly pliable. The line is neatly coiled up and laid on a sort of bracket or framework which is erected immediately in front of the kajaker, the harpoon resting in leather thongs by its side. To the extremity of the line is attached a float composed of the entire skin of a seal dressed and worked in oil. Every aperture in the hide is carefully closed with plugs of ivory grooved so as to hold the ligature with which the skin is bound, and made absolutely air- and water-tight. One, however, is merely stopped with a wooden plug, so that the bag may be readily inflated. This bag is placed in a convenient position on the deck of the kajak, and so arranged that, while safe from accidental disturbance, it can be released instantly.

The shaft of the harpoon is more carefully constructed than that of the spear, and has near its end a most inge-

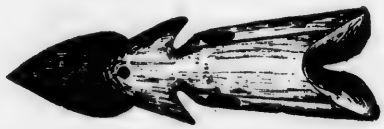
ATTACKING A WALRUS.

nious throwing device. This consists of a flat or nearly flat piece of wood about two feet in length, which may

HARPOON OF THE DISKO NATIVES, SHOWING THE THROWING STICK.

be called a handle or throwing piece. In the end of this is a hole, into which fits a curved peg of ivory on the shaft of the harpoon, while the other end is so carved as to furnish a comfortable grasp for the hand.

In using this implement on a seal the kajaker grasps the harpoon firmly in his right hand, releases his seal-skin float, and with his left hand steadies the boat by means of the paddle placed crosswise on the surface of the water. The throwing piece is held firmly in the hand, while two fingers only grasp the shaft. Raising the arm, the weapon is hurled with remarkable accuracy and to a very great distance. The handle becomes detached and remains grasped, while the shaft receives the whole momentum imparted through the ivory pin by which it is connected; the speed attained is such that



HARPOON-TIP, DISKO.

one hundred feet is not an extraordinary distance at which the Eskimo essays the killing of a seal. The line instantly uncoils, the air-bag follows, and the animal is

almost invariably secured. Diving, it seeks to escape, but its first movement dislodges the shaft, which, with its ivory point, floats away unharmed. The Eskimo's first object is to secure this precious portion of his worldly possessions. He afterward follows the track left by the air-bag, sure that his prey cannot escape. The seal, being unable to drag the bag beneath the water, is almost certain to be captured, provided the harpoon-head has been securely fastened, though many thrusts with the spear may be necessary to finally despatch the animal. An air-bag similar to the one shown in the illustration is then attached to the carcass, and the Eskimo proceeds to hunt for another victim.

AIR-BAG.

The circumstances are quite different in hunting the walrus, which, when attacked, is one of the fiercest of animals. Instead of endeavoriug to escape, it almost invariably turns on those who dare to molest it. A kajaker never disturbs one except when it is near the edge of an ice-floe, for the infuriated animal would destroy the frail boat and certainly kill his assailant if the latter did not escape to a more stable element. Like other marine animals, when struck by a harpoon the walrus "sounds" or dives to the bottom. The kajaker takes this opportunity to reach the floe, gathering on his way the harpoon-

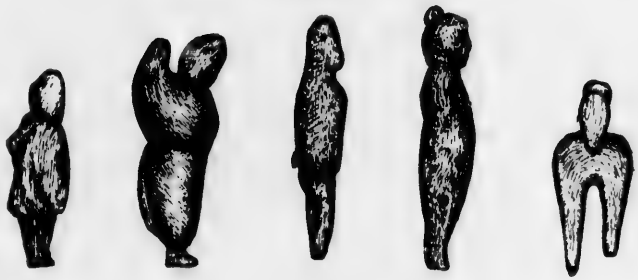
shaft and air-bag. Arrived on the floe, he plants his spear firmly in the ice, and, winding his line about it, proceeds to "play" the walrus exactly as a scientific fisherman plays a trout. The walrus must come up to breathe, and the untutored savage sees to it that it can only arise within striking distance from the ice; a savage thrust from a spear sends it down again, exhausted by another bleeding wound and a deprivation of air. Finally it dies, either from loss of blood or drowning, and is dragged out with infinite labor and all the gratification that a triumph of intellect over brute strength can afford, added to the satisfaction of the capture of a most valuable prize in a country where blubber, hide, ivory, meat, and bones are the only things worth living for.

In endeavoring to obtain some of these spears and harpoons the natives were willing enough to let us have the ivory parts, but would not on any account part with the wooden shaft unless wood was given in return. They prized wood above any other material, and the value of that article was rendered evident by the fact that many of the spear-shafts were made up of a number of pieces tightly bound together to make a single stick of sufficient length.

Among other interesting articles obtained from these Cape York natives were a bone thimble, some children's toys made of ivory, and tokens or charms worn by the adults. The bone thimble resembled our metal ones, and had evidently been made for sewing with ordinary steel needles which had probably been obtained from some visiting whaler. The native needle is a thin flat

TOYS MADE OF IVORY, ACTUAL SIZE.

SLEDGES.



HUMAN FIGURES.

SEAL.

DOG.

BEAR.

piece of bone about four inches long and an eighth of an inch broad, with an eye in the end. In using these, of course, no thimble is necessary, as they are grasped in

"BUZZ SAW" OR "BULL ROARER."

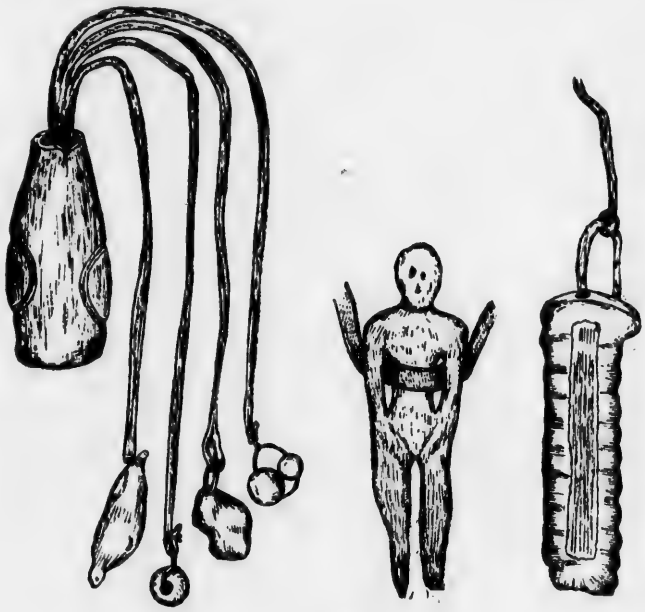
the hand and thrust through the skin instead of being pushed with the finger.

The toys were small pieces of ivory or bone, an inch or two long, cut to resemble a seal, bear, dog, or even a person.

Another toy was composed of a flat piece of ivory about three inches long with two holes near the centre. A leather cord was passed through these holes and the ends grasped in each hand; on twisting the cord and then pulling its ends the piece of ivory was made to spin around rapidly, first one way and then another, just as do our boys with a round box-lid and string in the juvenile implement commonly known as a "buzz saw." A more complicated toy consisted of a piece of ivory about four inches long and an inch in diameter, with a

TOY FOR CUP-AND-BALL GAME.

cavity in its upper extremity. To this piece was attached, by a cord, a smaller one, pointed at one end and blunt at the other. Grasping the smaller piece in the hand, the larger one was thrown in the air and an attempt made to catch the point of the pin in the hole in the top. This, of course, is similar to our common cup-and-ball



CHARMS.

toy, the only difference being in having the pointed pin instead of a ball.

The children of the natives in Whale Sound, further north, also had toys similar to those obtained by us at

Cape York. Some of the adults wore various articles made of bone or ivory suspended by a cord around the neck. One of these was rudely shaped like a man; others consisted of the teeth of various animals; while one of the most elaborate was composed of a piece of ivory shaped as shown in the accompanying illustration, a small stone, and three large glass beads. These necklaces were not used simply as ornaments, but rather as charms, for their owners appeared to value them quite highly, and only parted with them reluctantly. The Cape York natives evidently see white men at times, as more evidences of iron and wood were found here than further north, and the possession of an old and rusty gun, stamped with the name of a whale-ship to which it had belonged, was found among their effects on shore. We gave them one of our guns and some ammunition in exchange for a kajak, a sledge, and some narwhal-horns. Needles, knives, and bits of iron were rapidly exchanged for ivory, spears, and lesser curios. Wood for making sledges and the framework of their skin boats seemed

NARWHAL-HORN.

even more desired by them than iron, and the small fragments of wood of which many of their implements were constructed showed how limited was their supply of this necessary article.

The last thing obtained from the natives in the way of trading was a young Eskimo dog. This was evidently prized very highly by them, and was only parted with

after much bartering. One of the natives walked out on the ice to the ship, holding the puppy in his arms, then, raising it up, indicated that it was something valuable, and wanted to know what we would give. I got one of the sailors to negotiate for it, and at last, after refusing several pieces of iron, he was offered a broken oar and the lid of a soap-box; this induced him to part with it, and he walked off in triumph with his wooden acquisitions, while I retained possession of the pup. On examining my prize I found him to be a dirty white, woolly little animal with a black patch on the side of his head; he was about ten or twelve inches long, chubby and fat, with a peaked nose, erect ears, and bright dark eyes. He had sharp little teeth, and, as nearly as we could estimate his age, was about eight or ten weeks old. He was stowed below with the sailors in the forecastle, and there entertained and fed. His first diet was condensed milk and oatmeal. He soon became acquainted with his surroundings, and began excursions on his own account. Directing his attention to the steps leading from the forecastle up to the deck, it was not long before he succeeded in making his way to the less restricted and lighter regions above.

Arriving on deck, a fresh field was open for his investigation. The first results were made known to us by seeing him come ambling back toward the after part of the ship, where several of us were sitting, his nose covered with blood and his woolly body full of feathers. A search was immediately instituted to discover what he had been at. The cause was soon found. In the bow of the ship

were seen the mangled remains of several highly-prized specimens of birds obtained by Professor Holt. On discovering his loss, the professor was somewhat chagrined, but bore his misfortune with philosophic fortitude. Hav-

"MICKEY."

ing once tasted blood, Mickey (for so the Eskimo called him, and we did likewise) continued to pursue his sanguinary way; indeed, his tastes enlarged to such an extent that he soon ate not only all the birds, ducks, and other fresh animal food that he could get hold of, but also potatoes, bread, biscuits, and, in fact, anything that he could swallow. Things that he could not worry down he contented himself with chewing. Under this list came such articles as boots, shoes, clothing, ropes, and everything else above decks that was not carefully guarded.

The actual limit of his appetite, like that of the Eskimo of whom we have already spoken, was never definitely ascertained. He would eat and eat until apparently double his ordinary size, and still appear to be as famished as ever. On the voyage home Mickey well earned his passage. In the words of the famous Artemus Ward, he was an "amoosin cuss." His playfulness and good-nature made him a favorite in both forecastle and cabin. The ship's cat and he also became great friends, and played quite amicably together. He was a true puppy through and through, and though born and reared in a region of perpetual ice and snow, was just as playful and interesting as any in warmer lands. He increased rapidly in size, intelligence, and activity, and, as the pet of all, received an amount of attention that would certainly have been lacking had he remained in his Arctic home.

CHAPTER XIII.

ASCENDING THE IRON MOUNTAINS.—GREENLAND GLACIERS.—AGAIN ON OUR WAY HOME.—THROUGH WAIGATE CHANNEL.—A GLORIOUS SUNSET.—SEARCHING FOR COAL DEPOSITS.

AS time was passing rapidly, we were anxious to start on our way south, and only awaited better weather. The last day of our stop at Cape York was misty and rainy. Nevertheless, Professor Heilprin determined to utilize it in ascending what are known as the Iron Mountains. On the map they are designated as mountains, though it is very doubtful whether they reach to an altitude of two thousand feet. They were discovered by Ross. He found the natives in the possession of rudely-fashioned iron implements, some of which are still preserved in the British Museum. From what information he could gather from the natives Ross was convinced that they themselves had manufactured the iron from masses found in the mountains back from the coast. It seems highly improbable that this primitive race should have discovered the art of iron-making, but, so far, it has been impossible to account for the iron on any other theory; for there is no known communication of the dwellers in the southern part of Greenland with those above Melville Bay, and the whalers had not, at the time of Ross's visit, commenced to make the perilous voyage

to Lancaster Sound. In view of the relic of the Hayes expedition already referred to, which had been preserved for over thirty years, it did not seem to us impossible that the iron implements which Captain Ross found in their possession were made from fragments of iron found on wreckage which had floated to their shores and been battered into shape by the aborigines. On account of this uncertainty we were anxious to discover whether any trace of iron manufacture existed, and the interest was redoubled when, in a skin tent, was found a heavy stone evidently containing iron. While it proved to be only a form of iron pyrites of very poor quality, it still seemed to indicate the presence of the metal, and the natives, when questioned as to its origin, undoubtedly pointed to the high land back from the coast. In spite of the cold, driving rain and sleet-storm, it was determined to ascend the mountains. The geologist and botanist with two Eskimos constituted the exploring party, the rest preferring the comfort of the ship's cabin rather than face the disagreeable weather outside.

Reaching the shore by crossing over the ice, the little party rapidly ascended a small knoll which marked a spur of the mountain, and began to climb over irregular rocks covered with a black and slippery lichen. The ascent soon became very difficult, great boulders blocking the way and compelling detours where the footing was most insecure. The storm soon changed to a mixture of snow and sleet which raged with all the fury of a gale and at intervals obscured the surroundings. Occasional glimpses of the ship, lying peacefully at anchor in

the little cove far below, served as a guide to their course, and as greater heights were reached, the tops of three small islands which laid about ten miles off the coast, south of Cape York, came into view. Contrary to the experience at McCormick Bay, the ascent became easier as the top was neared, not so much, however, from the lessening of the steep grade of the mountain as on account of the better footing. The black lichen disappeared, as did also the large glacier-worn boulders, and in their stead were hard granite rocks and finer pebbles. Gradually almost all vegetation disappeared, and soon a comparatively level plain of stones and small rocks was reached, easy progress then being made. The height indicated by the aneroid barometer was about seventeen hundred feet. No sign of iron or iron-bearing rock was observed. The stones were of every variety, from slate and sandstone to the hardest flint and granite, and had evidently been swept to their position by glacier action alone. Near the crest was found a small cairn. It seemed to have been built by human hands, but whether civilized or savage it was impossible to determine. In spite of the storm, which now had redoubled in violence, the two white men pressed on alone, for the Eskimos had refused to continue up to the crest, and had seemed to indicate by their cries and motions that it was dangerous to do so. They never venture into the interior, nor even visit the ice cap, as to them it is the abiding-place of evil spirits and demons, and inspires them with terror. The ice cap, which did not differ in any particular, as far as could be seen, from

that at McCormick Bay, was soon reached, and from it two glaciers were seen projecting into the sea.

The method of the formation of the Greenland glaciers was here admirably illustrated. As far as the eye could reach, to the north, the north-east, and north-west, lay an almost level sheet of ice, the product of centuries of winters. This covered all the natural inequalities of the ground, and served as the great source of supply for all the glaciers of the coast. It is only where spurs of land run to the sea, similar to the one that was ascended, that the underlying rock is visible, and even this is partially covered by the débris left by the retreating ice sheet. In reality, all Greenland may be said to be one great glacier, and the thousands of so-called glaciers, many of which are twenty or more miles across their face, are merely prolongations to the water's edge of this enormous mass of ice and snow.

It was useless to press onward, for the sleet obscured almost all natural features, and a retreat was made down what had evidently been an ancient glacier-bed, but was now covered with a heavy growth of moss and other vegetation. Here the botanist found a rich assortment of plants as a reward for his labors and the disagreeable weather that had been encountered. Large patches of red snow were crossed, and finally the beach was attained near the spur, on the opposite side of which the ship was anchored. Here was found an immense natural harbor, the cliffs rising perpendicularly to a great height, forming a natural basin with a contracted entrance. The spur of land was crossed with some difficulty, and the ship reached

after nearly four hours of constant but interesting toil. The object of the trip, the discovery of iron or iron-bearing rocks, was not accomplished, but a far more satisfactory knowledge of the natural configuration of the ground was obtained than would have been possible by observing it from the decks of the ship; a quantity of valuable material was also gathered.

Soon after the return of the mountain party the ship was prepared to start. The fog, which had been almost constant during our stay of a day and a half, at last lightened, and now and then, through occasional rifts in the clouds, open water could be seen to the southward. The few lingering natives were told to leave the vessel, and it was only as the ice-anchors were brought aboard that the last one reluctantly wended his way over the side. "Sar-pook, sar-pook" (good-by, good-by), they cried, as we slowly left their dreary home, mysterious people of a mysterious land.

In sharp contrast to the long struggle northward through Melville Bay was our southern trip over the same waters. On the northern journey we had encountered a vast and almost continuous sheet of ice, which seemed as permanent as the eternal hills. On the southern trip we found open water, with only an occasional iceberg to remind us of the great floes and ice masses we had met with a few weeks before. Constant fog and head winds, however, delayed the vessel, and our progress was particularly slow. We ran well out from land, but still in view of the higher headlands. The Horse's Head, a most peculiarly shaped point of land, and Red

Head, another conspicuous point, were the only ones definitely recognized until Devil's Thumb was reached. We had hoped to land and examine the latter curious formation, but no attempt was made on account of the storminess of the weather. Upernavik was passed at midnight; we did not stop, but continued on our way down the coast.

The next day found the atmosphere still thick, with a heavy sea running, and the ship was hove to all the afternoon in the neighborhood of Kingartak Island, which is west of Svarten Huk Peninsula. This great and almost unknown body of land lies north of Disko Island. The impossibility of making progress against the heavy wind and sea tempted Captain Pike to enter a fiord on the Svarten Huk in search of easy anchorage. The fiord is unmarked on the map except by dotted lines, and it was agreed that we would name it "Pike Fiord" in honor of our veteran commander. Its entrance is about two miles wide and protected from the sea by a small island which divides it into two passages; through either of these a ship can easily enter. Inside of this natural harbor is a wide, roughly irregular bay, protected on both sides by high mountains, to whose bleak, dark sides the peninsula owes its name. Here we found a good anchorage in twenty fathoms of water, the bottom being mud mixed with sand. The wind still blew fiercely, but as the ship was now safe, we determined to remain until it moderated. Some went ashore, and were well repaid for the rather rough passage across the bay. A river was found, emptying into the upper end of the fiord; here a landing

was effected without difficulty, and a general exploration began.

Flowers grew on every side in the greatest abundance and beauty. There were evident signs of game, and hunters and naturalists alike trudged off in search of specimens. The land rose rather abruptly, and within half a mile of the beach the river was found to be rushing through a narrow, rugged gorge, making a series of cascades of surpassing beauty as it leaped from rock to rock and fell into a pool beneath. Having seen at Godhavn some salmon-trout which had been caught by the natives, one of our companions essayed fly-fishing. The water was icy cold, and no sign of animal or vegetable life was to be seen in its depths; however, he whipped the stream industriously with various flies and even the native mosquito, which was there a large and lively pest, but without success.

Farther up the river again widened, and a large plain, lying between the frowning mountains, appeared. Here also a rich harvest of flowers was gathered, and every once in a while a beautiful ptarmigan would be started. Several of the latter were shot. They seemed very bold, and did not hesitate to scold the hunter vigorously for intruding on their domain, showing that they were seldom if ever disturbed by man. A diligent but unavailing search was made for their nests, and a few coveys of young birds were seen at a distance; they were fully fledged and much more timid than the older birds. Two of the hunters ascended the mountain, but found nothing of consequence to reward their toil. Mr. Kenealy and my-

self went for some distance along the shore, finding an abandoned hut and getting a distinct view of a glacier which, as usual, closed the end of the fiord. No signs of the recent visit of Eskimos were present. A deep gloom pervaded this unfrequented spot, which neither the birds nor the flowers relieved. The high cliffs were almost black in hue, either from the natural color of the rocks or the dark lichens, and a few glistening white icebergs served only to intensify the deserted appearance of the land.

Some time during the night the weather moderated, and, making our way out of Pike's Fiord by the southern entrance, our course was shaped for the Waigate Channel, which was reached on the morning of the 8th of August. We entered this channel, instead of sailing outside, in order to examine the shores for evidences of coal deposits which were said to exist there. This sheet of water separates Disko Island from the mainland, and is about seven miles wide. At one time it was undoubtedly a fiord, being cut through to Disko Bay at a later period by glacier action, thereby forming the largest known island in Greenland. To the north of the island, and extending from the mainland far into the sea, is a neck of land known as the Noursook Peninsula. Both sides of the Waigate Channel present the same geographical outline, here and there small fiords and indentations characterizing its shores. High mountains tower above the calm and placid waters, and the silence is only disturbed by falling fragments of glaciers. The outline of the mountains is much more broken and irregular

than is that of the mountains of more northern Greenland, and the peaks and pinnacles add greatly to its grandeur. The lofty mountain-tops, partly covered with snow, seen in the beautiful, clear weather and warm Arctic sunlight, more resembled Alpine scenery than is usual in the Frigid Zone. On all sides the many and beautiful icebergs, reflecting the rays of the sun, seemed to vie with the mountains in their gorgeous splendor.

All day long the *Kite* steamed slowly through this enchanting scenery, but it was only late at night that the most beautiful and interesting phenomenon of all presented itself to view. At this stage of our voyage the sun in its declination had perceptibly diminished the light of night, and though not yet below the horizon, still descended enough to drop behind the high mountains of the Noursook Peninsula, thereby making a most glorious sunset. The bright rays illumined the sky behind the mountains, forming a background of the most brilliant colorings and delicate, changing tones. The fading of the sunlight continued but a short time, and the sun, again rising higher, o'ertopped the mountains, and the dawn of the next morning was upon us. The gradual merging of the lovely sunset with the splendor of the coming morn completed this most charming of days in Greenland.

The fine weather, which continued the next day, added to our enjoyment. We had had almost a week of fog before reaching the Waigate, but there were few regrets now for the delay, as, had we experienced the same weather inside the channel as had fallen to our lot

on the open sea, the beauty of our surroundings would have been shut out from view. The scenery of the mountains, although not so imposing as that of the previous day, was heightened by the increased number and magnificence of the icebergs. As the ship would slowly wend its way through the narrow channels between them (so close together were they), we could see many miniature cascades falling over the sides. The warm sun, melting the snow on their tops, formed small lakes or reservoirs, the overflow of which, trickling down,

ICEBERG IN WAIGATE CHANNEL.

fell into the sea. The course of the *Kite* was now directed close along the eastern shores of Disko Island, in order that a good view could be had of its rocky sides. At times, when its geological formation indicated the possible presence of coal, one of the ship's boats would take the geologist ashore for a closer inspection; but no

carboniferous fossils were found. Soon the shore-line began to assume a more level aspect, and a long, shelving beach was discovered dead ahead. As the water was noticed to be shoaling rapidly the ship's head was turned out into the channel; but it was too late: she had hardly answered her helm before we grounded. The engines were at once put hard astern, but to no purpose: the *Kite* was fast aground. The lead-line showed less than three fathoms of water and a bottom of hard white sand. Here we were, beyond the reach of any assistance, with so little coal and ballast that even were it possible to remove it, the ship would only have been lightened a few inches. Our situation was indeed a critical one, and preparations were immediately made to work the vessel off. An anchor with a long hawser was taken in a whale-boat and dropped some distance astern; the other extremity being attached to the steam-winch on the vessel, an effort was made, by winding up the line, to pull the ship into deeper water, but after several futile attempts this was abandoned. We were truly fast, and our only hope of escape lay in the possibility that we had grounded at low water, and the rising tide would float us off. The mate was sent ashore to ascertain the condition of the tide, and he returned with the grateful information that it was a couple of feet below high-water mark; so we waited for its rising before making any further efforts. This was the first mishap that had occurred to us on our return trip, and some of the more superstitious sailors attributed it to the presence of the Eskimo skulls which had been obtained further north.

While waiting, we observed, from the deck of the ship, some smoke arising from a hut situated on a point of land opposite to where we had grounded. In a few minutes several natives were seen coming down to the beach, having evidently made the smoke to attract our attention and let us know of their presence; launching their kajaks and getting in, they paddled rapidly toward us, and were soon aboard. We found them to be natives from the settlement of Godhavn who were there on a hunting expedition. By signs they gave us to understand that the tide would soon rise and float the ship; this aided in relieving our anxiety somewhat on that score. They greedily devoured some food that was given them, and afterward, on being shown a piece of coal, indicated that they knew what it was and where some could be found. As we had considerable time yet to wait for the rising tide, a few of us went ashore, accompanied by one of the natives who had signified his willinguess to act as guide and show us where the deposit was located. Professor Heilprin and the native started out to search for it, while the rest of us stayed along the shore and awaited their return. The land at this point rose gradually from the water's edge for a distance of about three miles, the beach being composed of sand and gravel. As one advanced inland the surface became rougher, being covered with rocks and boulders. We found some ptarmigan which were quite tame and ran slowly away as they were approached. A number of foxes also were seen, but they were more shy, and disappeared in the crevices and holes in the rocks as we drew

near. In two or three hours the professor returned, stating that his investigation had not been very satisfactory. He had travelled two or three miles inland and found some coal, but it was of so poor a character, in such small amounts, and so inaccessible as to render the deposit of little value. By this time we saw that the crew had succeeded in getting the vessel off, and she was steaming to deeper waters; so we got aboard, and the *Kite* once more started on her voyage.

CHAPTER XIV.

AT GODHAVN ONCE MORE.—METEORITES.—THE LAND OF DESOLATION.—TAKING ON BALLAST.—ON THE OPEN SEA.—NIGHT BEGINS.—OFF THE COAST OF LABRADOR.—APPROACHING ST. JOHN'S.—OUR RECEPTION.—A REVIEW OF THE TRIP.

STEAMING around the south-eastern extremity of Disko Island, we entered the fiord on which Godhavn is situated. As we were nearing the settlement Inspector Andersen passed us in his large boat, rowed by eight or ten natives. He was leaving Godhavn to make his annual visit to the adjacent settlements, which were under his supervision. He waved us a friendly farewell, but did not stop, and in the early morning of August 10th the *Kite* once more dropped anchor in the harbor of Godhavn. Mr. Carstens soon came out to the ship and heartily welcomed us. He told us that the long south-west storm which we had encountered, followed by heavy winds, had also been experienced at Godhavn, and that he and his associates had both feared that it would be too much for the *Kite*, and that they would never see us again.

The natives too came aboard, but, after our experiences with the aboriginal race further north, they scarcely interested us, and the few trifles they had to sell brought them but little return.

The *Kite* was forced to take on ballast at this port, for the consumption of coal and the removal of the effects of the Peary party had so lightened her as to render her almost unmanageable in a head wind and sea. A number of the natives were engaged to gather ballast for us, and it was evident, from the leisurely manner in which they set about it, that we would have to remain at least two days in port. This news was, however, welcome to all, for after our long isolation even Godhavn looked like home, and we were content to enjoy the pleasant companionship of the officials. The naturalists were soon on their collecting tours, some to the Red River, and some to the island of Godhavn. Professor Heilprin, accompanied by Mr. Ashhurst, hired a large native boat or

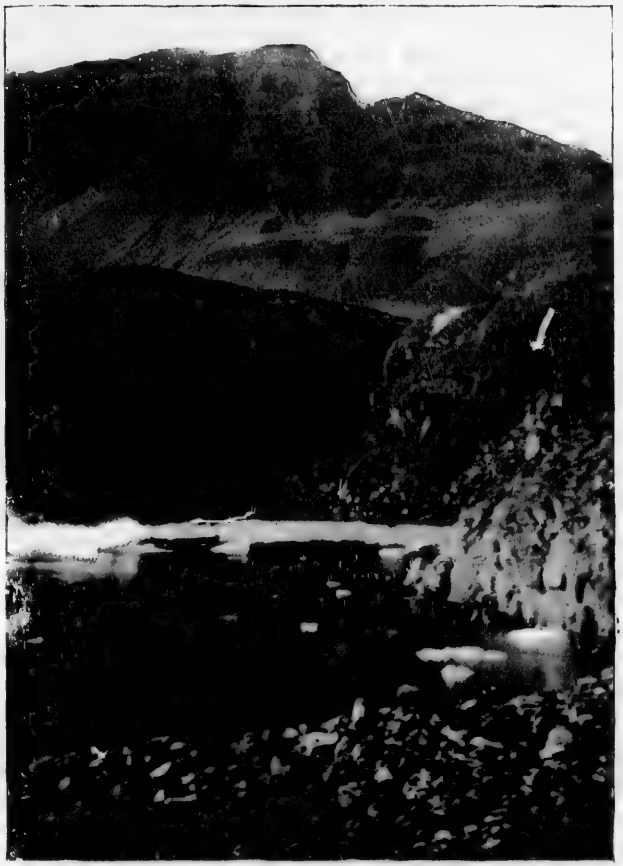
UMIAK OR WOMAN'S BOAT.

umiak, with its crew of seven Eskimos, and started for Uvifak, a desolate piece of land some twenty-four miles

from Godhavn, where was said to be the remains of a meteorite. This so-called meteorite consists of an aggregation of numerous masses of nearly pure iron which are found imbedded in the basaltic rock. The largest fragment was removed several years ago by a special expedition sent out for the purpose by the Swedish government. The whole had been estimated to have weighed 46,200 pounds. Several smaller fragments were known to exist, and it was thought highly desirable to recover some of these if it was possible to do so.

The journey was long and tedious, for the rudely-constructed umiak was slow, and, in spite of the hard and steady work of the natives, it was eight hours before the place was reached. Here was found a large meteoric fragment (now in the Museum of the Academy of Natural Sciences), and a little searching discovered several smaller stones. They were all irregularly-rounded masses having marks of fusion on their exterior, and were composed almost entirely of native iron. These facts seemed to point directly to a celestial origin. Nevertheless, the geologist found reason to think that they were not true meteorites, but were terrestrial formations which had been thrown or carried to the location in which they were found by volcanic or other phenomena. In any case, the discovery was a most important one, and the specimens were regarded as being among the most interesting and valuable of all gathered in the course of the voyage.

The evening shades were becoming more evident now, and we greeted with delight the first star which



A BIT OF GREENLAND SCENERY. DISKO ISLAND.

we had seen for more than a month; it was shining over the high hills of Disko. The new moon also was faintly visible in the clear evening sky. We were glad to light the lamps again in the dim little cabin, and here we gathered about Mr. Carstens while he imparted to us his knowledge of Greenland history and customs. His fund of information was very extensive, and he was able to inform us on many points not referred to in the books. Much of what was related has already been told in describing the social life and folk-lore of Greenland. He added, however, many points in relation to the history of Greenland which may briefly be recounted here.

Greenland, "The Land of Desolation," as it was well called by Hayes, was discovered by Eric the Red. Eric was a turbulent nobleman who, banished from Denmark, and later from Iceland, sailed westward to the coast of Greenland, to which he gave its somewhat deceptive title. It is related in the old chronicles that he gave it that name with the direct intention to deceive and defraud, hoping that "a fair name" might tempt colonists to settle. The voyagers all regretted that the exigencies of the trip prevented our stopping at Friedrickshaab, where the remains of old Eric's buildings are still standing, after a lapse of over nine hundred years; for the voyage of Eric was made about the year 986. The story of the settlement he made has often been told. The poor people whom he persuaded to settle in his "fair land" lived for a time peacefully and with some comfort; but there were many drawbacks to their welfare. They had to depend almost entirely for supplies of certain ma-

terials, notably wood and iron, on vessels which, for several years, came from Iceland. On one occasion, one or two years having passed without supplies being sent, the relief vessel found only their bones. They were the first victims of the Eskimos, and, as far as known, the last. What had happened was unknown, but it is supposed that the Skrallers or Howlers, as the natives were called, from the horrid noise they made at night, had slaughtered them after their numbers had been reduced by famine. The land, after this, lay idle and unoccupied by white inhabitants for hundreds of years, but at last was settled again, originally as a penal colony, and later, since the year 1774, as the personal property of the Crown of Denmark. This it still is, and "trespassers are forbidden." We learned this after we had committed the crime of landing on the northern trip, but as the offence was only a venial one, no punishment was inflicted on us. Denmark claims jurisdiction over Greenland up to the 73d parallel of north latitude. Above that it is no man's land, and, indeed, any nation might easily gain Denmark's consent to an abdication of its rights to southern Greenland, for we were informed, on highly trustworthy authority, that it has ceased to be a source of income, and were it not for the fostering care which Denmark has exercised over the natives of Greenland, there is little doubt but they would soon become extinct. The Eskimo population last year numbered ten thousand and thirty, a decrease of seven from the year before; and a steady diminution continues in spite of the systematic care and support which the government so generously extends to them. It is prob-

able that there are but few Eskimos north of Melville Bay. Captain Ross many years ago calculated their number at but two hundred, and the estimates of Arctic voyagers since his time have not exceeded it. We saw not over one hundred at both Whale Sound and Cape York, and but one other native settlement is known. This is a small village called Etah, situated on Hartstene Bay, about one degree further north than Whale Sound. This place we did not visit. It was here that Hayes established his winter quarters in 1860. It has but few inhabitants, and even if they were added to those that we saw, the total number would still fall far short of the estimate of Captain Ross. Greenland is under the control of a government board in Denmark known as the Koneglige Gronlandske Handle. It is divided into two inspectorates, north and south, divided by the parallel of 67° 40′ north latitude. The inspector of the former resides in Godhavn, and the latter in Godhaab. They are responsible to the home government. The inspectorates are divided into a number of districts, each having its own governor and assistant governor, who are responsible to the inspector in whose jurisdiction the district is situated. In the Northern Greenland districts, besides the inspector, governor, and assistant governor, there are no white people except a doctor who lives at Jakobshavn. In Southern Greenland there are two more physicians, one living at Godthaab, and the other at Julianshaab. After five years of duty they are allowed to enter the royal service in Denmark as district physicians.

All this and much more Mr. Carstens narrated to us

as we chatted together in the little cabin of the *Kite*. In our turn, we told him of the aboriginal inhabitants at Cape York, whom he had never seen. We asked him whether there were any relics left near Disko of the primeval Eskimos. He told us of an old graveyard situated across the bay from Godhavn, which was long abandoned, but where he said aboriginal tombs, exactly as we had described, still existed. The idea of discovering other relics immediately inspired me, and, launching a boat, with only Mr. Kenealy as my companion, I rowed across the narrow bay in the midnight twilight to the locality which Mr. Carstens had indicated. With some little difficulty the place was at last found, and tomb after tomb opened, with the result of unearthing quite a collection of skulls. No votive offerings such as we had found at Whale Sound were discovered, though earnestly sought for. This was accounted for, perhaps, by the fact that the tombs were ancient and their contents might have decayed away. Gathering together a number of skulls, we returned to the ship in the early morning, just before the return of Professor Heilprin and Mr. Ashhurst from their long and tiresome journey of some sixteen hours' duration.

All hands were weary when, at about 3 A. M., we went to bed, and it was not until late the next day that the customary activity prevailed among us. The work of loading ballast for the ship still continued, but in the most leisurely fashion. A boat being sent to the beach, the natives would gather blocks of stone, carrying them one by one until a load was procured. These in turn

were passed up the ship's side and dropped carefully into the hold.

It was our last day at Godhavn, and, as it turned out, also our last in Greenland, and all were anxious to make the most of it. I saw no opportunity to add to the collection already made, so a consideration of a more practical nature than that which inspired the others moved me. I had observed that the breeches made for me at Cape York by the Eskimo women were not pliable, like those worn by my comrades, which had been made at Godhavn. They were stiff and ungainly, and, when not in use, like stovepipes in rigidity. A conversation with one of the Eskimos who spoke a little broken English, and the translation of whose unpronounceable name was Raven, revealed to me the cause: they had not been chewed. It appears that it is necessary to carefully chew the seal-skin to render it sufficiently pliable. This was unwelcome news, for I knew of no one who would care to chew the garments, filled as they were with rancid oil. But Mr. Raven, in consideration of a certain amount of plug tobacco, kindly offered to manage all that, and, escorting me to the house, introduced Mrs. Raven to me, with the brief direction to her (at least so I suppose) to chew the garments thoroughly. I remained to witness the operation, which she began with that cheerful alacrity that characterizes the Eskimo woman when directed by her lord, but the sight was not pleasant, and I left the garments to her tender care. I must confess that she did the work in the most skilful manner, and also added a couple of buttons, so that I was no longer com-

pelled to tie them together with thongs. Mr. Raven brought them back in the afternoon in a most satisfactory condition, and I paid him the tobacco agreed upon. I suggested that his wife should have something to compensate her, instead of paying him, but he did not seem to understand me, and the subject was dropped.

At 1 A. M. on August 12th steam was made, and we left Godhavn. All were on deck, and we took a last look at the place which will always remain the most pleasant in our memories of Greenland. A solitary star shone brightly over the village. By its brilliancy we knew it to be the planet Jupiter, as the night was not yet dark enough to show stars of lesser magnitude. A few minutes sufficed to take us out of the harbor and place us once more on the open sea. The weather continued good all day, and we made an excellent run. Early the next day a strong wind sprang up, which soon developed into a gale. The sea ran mountains high, and our ship was tossed about so violently as to be almost unmanageable. It sent all but those who were actually employed in working the vessel to their berths for safety. It was almost impossible to move around without great danger, and we all kept pretty quiet as long as the blow lasted. After some hours the wind began to subside, leaving a heavy swell which pitched the vessel about as if it were a chip. The weather was hazy, with rain at intervals, which, much to the relief of all, gradually calmed the sea. The chief engineer, Mr. Jardine, reported that only enough coal remained to take us direct to St. John's, so we were forced to forego the pleasure of visiting several

points in South Greenland, as had been our desire. The weather now became clear and bright, with a fair wind. Early in the morning a brig was sighted sailing south, about ten miles to the westward of us. All went on deck to get a look at her. It was remarkable that what in other waters would be such a trifling event, in these untravelled seas commanded all our attention. For nearly three months, with the exception of those at Godhavn and Upernavik, we had not seen a ship nor any sign of civilized man. The stranger was a trim little craft, not far enough south to belong to the line which carries cryolite from Ivigtuk to Philadelphia, and too far north to be in the Danish trade with the North Greenland settlements. All these latter had left Godhavn, on their voyage to Denmark, long before our own departure. We did not expect to meet any vessels, because it was so late in the season that sailing ships would hardly venture so far north for fear of being caught in the ice. We had ourselves taken the last mail from the North Greenland settlements, the governor bringing it off to us the night we left Godhavn, and stating that it was the only opportunity he would have of sending any until next season. The brig was too far off our course to speak her, and as it would have taken too much of our now valuable coal to have sailed within communicating distance, she remained as mysterious as when first seen, and the cause of the only excitement of the day.

On Sunday, August 16th, the wind was dead ahead, and stormy enough to cause considerable sea, which made the distance run much less than on the previous day.

Darkness at this time began about 9 P. M., and the lights in our cabin and about the ship were now used, after many weeks of continuous daylight. We had had a sight of the moon for the past three nights, and the numerous stars visible in the heavens gave the sky more the appearance of that of the Temperate Zone. The North Star was very bright, and seemed almost directly overhead. The strong head wind and high seas continued until morning, and it was necessary to put the ship three points off her course to ease her up. Twenty-four hours later the sun was again shining, and made everything look brighter. The sea had gone down, and early in the evening the moon, which was now full, was seen in all its beauty. At 10 P. M. we were treated to the magnificent spectacle of the aurora borealis as seen in these Northern waters. No conception of its brilliancy can be had at home, and it will be remembered as one of the many strange sights this interesting voyage afforded us. The next day the weather was again fine, and the sea as still and calm as the proverbial mill-pond. A light favorable wind came up toward night, when all sails were set and our ship sped along at a more rapid pace than for some time. About 8 P. M. a large steamer in the east was seen to be bearing down upon us. As it evidently wished to speak us, the *Kite* was stopped and its approach awaited. It proved to be the *Carthdee*, of Scotland, and we found that they wished to know the course to Indian Harbor, Labrador. This information was given them by Captain Pike, and after exchanging salutes we renewed our respective courses.

On August 20th we reached Labrador and skirted the coast. The land was high, rocky, and in places appeared green from the presence of vegetation. It looked more hospitable than the more barren shores of Greenland. Hundreds of fishing-boats were now seen everywhere, and signs of civilized man greeted us once more. Large icebergs were still floating here and there, the only reminder of our late trials and dangers. The steamship *Panther*, of St. John's, was spoken. This vessel was interesting as being the one that had taken Dr. Hayes' expedition as far as Melville Bay, years ago. It had been rebuilt since then, and was quite a trim little craft. On the night of August 20th we were abeam of Belle Isle. On the following day head winds were encountered, with rain. The ship, being so lightened, was now quite hard to drive through the heavy seas, and the pitching and tossing commenced once more.

On August 22d the sun, shining brightly, showed the green and picturesque shores of Newfoundland. The transformation from the icy North to a land again inhabited by our own kind was indeed striking, and heartily appreciated by all. The sea was quiet, and we soon arrived in sight of the harbor of St. John's, and were safe once more.

It was on a beautiful Sunday morning that the voyage of the *Kite* came to an end. All hands were busy making themselves presentable for civilized society, and the transformations that were accomplished by some of the members were truly astonishing. About 9 o'clock we came in sight of the entrance to the harbor of St. John's.

Our arrival was signalled at once from the top of the great cliff which marks one side of the entrance. Its crest was surmounted by a fort and signal station, and from it signal flags were flown in succession, which, being interpreted, meant "A steamer coming in;" "Bowring Brothers;" "the *Kite*." we were reported. These signals are plainly visible at St. John's, and the crew were overjoyed that their families would soon know of their safe return from the Arctic regions.

It took nearly an hour to reach dock, for the entrance to St. John's is narrow and tortuous. Through lofty cliffs the passage wends its way to a splendid harbor, second to none in the world, and it is not until the last bend is passed that one sees any signs of a large city or even civilization. Finally, buildings appeared, and in a moment the whole city, with its blocks of houses ranged in terraces of streets, was in full view. The narrow channel widened to a great bay, on the shores of which laid the town. To the right was Signal Hill, from which the notice of our arrival had been sent; to the left rose another great promontory, crowned by the arsenal and fort with which England protects this important port; and, immediately in front, the city of St. John's, with the high cathedral towers dominating the town.

Our signal had evidently been seen, for the townspeople flocked to the wharf, and, before the ship could be made fast, overwhelmed us with inquiries; but, being tired of sea-life, we were anxious only for rest and a comfortable hotel. This was found without difficulty on the main business street of the city, after sending away a

SIGNAL STATION, ST. JOHNS HARBOR.

few telegrams to assure the folks at home of our safe arrival.

We were compelled to remain at St. John's for five days, as no steamer left until the following Friday, when the *Nova Scotian*, of the Allan Line, departed for Baltimore. The time was spent very pleasantly, however, for we found numerous friends among the honest Newfoundlanders. Mr. Molloy, the American consul at the port, entertained us with the greatest cordiality. Mrs. Molloy was equally hospitable, and insisted on the whole party being invited to their house. Not less courteous was the Rev. Mr. Harvey, the historian of Newfoundland, who was kind enough to personally introduce us to the governor, Sir Terance N. O'Brien, at the Government House. His Excellency received us pleasantly, and invited the whole party to the reception which it was proposed to give to Sir Ambrose Shea, a former governor of Newfoundland, who was expected to arrive at St. John's on the *Nova Scotian*, *en route* to his new post at the Bermudas.

Besides these acts of distinguished courtesy, we were the recipients of marked attention from other citizens of St. John's. Several of us visited the British war-ship *Emerald*, which lay in the harbor, and were most hospitably received by the captain, Sir. Baldwin W. Walker, Bart., and the other officers of the ship.

On Friday morning we left St. John's on the *Nova Scotian*, and after an uneventful voyage—save for a short stop at Halifax, N. S.—arrived at Baltimore, whence we proceeded to Philadelphia, where we arrived on Septem-

ber 8th, thus completing our voyage in a little more than three months.

To review the trip: the object which moved Lieutenant Peary was a most laudable one, and if successful will add greatly to our knowledge of a most obscure quarter of the world; on the part of the returning members of the expedition, they brought home, besides much valuable information, many specimens of the flora and fauna of Greenland. Such collections, whether anthropological, zoological, botanical, or geological, are always of benefit to the world's fund of knowledge.

This is the main aim of all explorations, and the members of the expedition have no reason to be ashamed of their contribution. There were more than seven tons of material brought back, a large proportion of which is now in the Academy of Natural Sciences, ready for the use of future students of the various features of Arctic life. The skulls and other anthropological material which we were fortunate enough to obtain have proved a most useful addition to the fine collection now in the Academy's museum. Not less valuable were the additions made in ornithology, in invertebrate zoology, in entomology, and in botany. Every separate object, whether an Eskimo child's toy or a meteoric mass, has its value in the eyes of the true scientist, who knows where each belongs in the great economy of nature.

It was not until the voyage was nearly over that we fully comprehended what we had done and what we had aimed to do. The realization of the dangers so recently passed seemed to increase as we neared home and had

more time for reflection. The tales of Kane and others now came back to memory with such vividness and realism that the imagination needed not to be called upon for scenes and places; indeed, so strange and different had been the Arctic land and its people that one might have asked whether it was still our own world. The inconceivable immensity of the glaciers, the mere fragments of which make gigantic and lofty icebergs; the midnight sun, shining on the illimitable ice cap; the strange and curious forms of animal and vegetable life; the intense solitude, unbroken save by the heavy rumbling and thundering of collapsing bergs, which at times, though many miles away, would make almost tidal-waves by their sudden displacement of the water, and very perceptibly cause our ship to roll and toss on the troubled sea,—again and again passed in review before us as we sat lazily dreaming on the sunlit decks on the passage homeward. The heavy gale we encountered on leaving Whale Sound, where we were but a mile or two from a lee shore, with crashing bergs everywhere around us and the weather so thick that not a ship's length could be seen from our deck; the grounding of our ship in Waigate Channel, and our numerous escapes from being wrecked by the ice,—all caused us to realize how close we had been to having met the fate of so many others who had ventured to the frozen North.

PART II.

THE RELIEF OF PEARY

AND

THE LOG OF THE KITE,

ETC.

INTRODUCTION.

THE sheets for "The Voyage of the *Kite*," which forms Part I. of the present volume, were scarcely off press when it became evident that a larger edition would be needed to supply the demand. The authors decided, however, to await the return of the Peary Relief Expedition which had just been sent out by the Academy of Natural Sciences, and to include, if possible, in the new edition a brief account of Lieutenant Peary's explorations and life in the North. The result has fully justified their caution. The relief expedition was not only entirely successful in finding Lieutenant Peary and his party, but also in extending the fields of explorations undertaken by the West Greenland Expedition. So much material was placed at the disposal of the authors by members of the relief expedition, by Captain Pike and by Lieutenant Peary himself, that the idea of an appendix was abandoned and it was decided to issue an entirely new work which should be a brief but complete story of the Peary Expedition of 1891–'92.

The present volume includes the story of the West Greenland Expedition of 1891, which escorted Peary and his party to North Greenland. It tells of their long winter sojourn in that desolate land. It describes the

life of Mrs. Peary in her unique position as the only white woman who ever wintered in the extreme North. It gives a brief account of Lieutenant Peary's grand dash northward overland, and of his successful return. It recites the complete story of the relief expedition from its conception to its fulfillment with the finding of Peary on the ice-cap. It contains the fullest account yet published of the loss of Mr. Verhoeff, with the rumors and suspicions which were excited by that loss. And it briefly describes the welcome home which the explorers received after the most successful Arctic expedition of modern times.

The expedition was wonderfully successful. With only one man missing, without undue danger or exposure this little band accomplished more in fifteen months than had been done by all the previous expeditions since Kane. It succeeded in mapping out a large extent of previously unknown country about Inglefield Gulf. It explored thoroughly the great Petermann fiord of which only the entrance was hitherto known. It penetrated to the northern limit of the great ice-cap of Greenland and fairly indicated the northern boundary of that great island. It reached within 100 miles of the furthest point north ever reached by man, and mapped the eastern coast of Greenland fully 200 miles north of the furthest point heretofore reached on that coast.

This is a grand record, and one of which Lieutenant Peary and his party may well be proud. He did not succeed and he did not anticipate being able to succeed in

RED CLIFF HOUSE—THE HEADQUARTERS OF LIEUT. PEARY—McCORMICK BAY.

his short journey in planting the American flag at a point further north than it had alreadv been planted by Brainard and Lockwood, but he has proven that the latter must have reached either an outlying spur of the great Greenland continent, or, as is more probable, an island lying in the paleo-crystic sea. He has shown that the method which he first employed for exploring the interior of Greenland is not only perfectly feasible, but productive of the greatest results for the least exertion and danger.

He was able also to map out accurately a large portion of the western coast of Greenland which has hitherto been only imperfectly explored, and to prove by the experience of his party, which included his young wife, that it is possible for white people to live in comparative comfort in any climate in the world.

Captain Richard Pike, the commander of the *Kite*, on both the expeditions to the North, gave the authors the use of his official log of the voyage which is here reproduced in full. It will be seen that the relief expedition was remarkably fortunate, the *Kite* meeting not a single storm nor having been delayed by ice to any considerable extent in her long voyage to the entrance of Rensselaer Bay, in 78° 23′, or in her return to the Delaware Capes. *The value of this official record can scarcely be overestimated. It gives an authentic record of the whole expedition.*

Mr. William E. Meehan, who accompanied the relief expedition as botanist, has graphically described the journey. His facilities for observation and his skill in

portraying the incidents of the voyage, make his portion of the work of peculiar interest. The authors ask me to express their appreciation of his kind endeavors.

The only sad incident of the entire story is the loss of Verhoeff. Whether he strayed away intentionally with the idea of spending a winter alone in the Arctic highlands, or, whether, as Lieutenant Peary believes, he was lost in the glaciers, is one of those mysteries which the icy North holds and will in all probability never be unfolded. All the information that it was possible to obtain on the subject has been procured, including the correspondence between Mr. Verhoeff and Lieutenant Peary before the expedition sailed, and the official record of search as drawn up by Captain Pike when the unfortunate young man was found to be missing. The latter has been reproduced by photographic process. The melancholy interest in the young man's fate is very great, and these records will serve to satisfy it as far as is now possible.

The authors have asked me to thank Mr. Melville Philips and Mr. Stephen Pfeil for their assistance in preparing this record of the Peary Expedition of 1891–'92.

W. H. BURK.

THE LOG OF THE "KITE."

RICHARD PIKE, MASTER.

(Reprinted verbatim from the ship's log-book, by permission of Captain Pike.)

DIARY OF THE PEARY RELIEF EXPEDITION TO WEST GREENLAND.

COMMENCING JULY 4, 1892.

MONDAY, JULY 4, A. M.—Begins strong breeze from S. W., with thick cloudy weather. S. S. *Kite* engaged for the expedition, lying at owner's wharf. 9 a. m., the relief party from U. S. came on board, consisting of the following members: Professor Angelo Heilprin, Academy of Natural Sciences, Philadelphia, and commander of the expedition; Henry G. Bryant, Philadelphia, second in command, explorer of Grand Falls of Labrador (1891); Dr. Jackson M. Mills, surgeon, William E. Meehan, Philadelphia, assistant editor of the Philadelphia *Ledger*, son of Professor Meehan, Vice president Academy of Natural Sciences, Philadelphia; Albert White Vorse, exchange editor of Philadelphia *Press;* Frank W. Stokes, Philadelphia, artist representing *Scribner's Magazine;* C. E. Hite, Burlington, N. J., zoological preparator; Samuel J.

Entrikin, West Chester, Pa., formerly Director of the Schofield Industrial Schools of Aiken, S. C. People employed taking on board stores shipped by *Miranda* from New York. Noon, gale from S. W. Busily engaged preparing for the voyage. Members of the party put luggage on board, and took up their quarters first night on board the *Kite*. Midnight, heavy gale from S. W.; thick, cloudy weather.

TUESDAY, JULY 5, A. M.—This day begins, as yesterday, with strong gale. 4 a. m., heavy rain. 8 a. m., wind moderate and fine. People employed putting on board coal stoves. The party enjoyed their night's rest on board; also partook of a good breakfast. Noon, fine. 2 p.m., first whistle to start. 2.15 p.m., second blows. 2.30 p.m., cast off from the wharf, all on board; backed in the harbor amid cheers from the shore, with all the good wishes imaginable, accompanied by Messrs. Bowring's steam launch. Outside the narrows, 3 p. m., parted company with steam launch and well-wishers amid a volley from revolvers, and shaped our course for Greenland. P. M., passed north end of Baccalieu. Moderate breeze from N. E. and few heavy swells heaving from N. E. 10 p. m., *Miranda* passed us by, bound for Little Bay; exchanged three whistles and parted company. Midnight, calm and fine; engines going full speed.

WEDNESDAY, JULY 6, A. M.—Begins light breeze from the eastward, and fine all fore and aft. Canvas set 8 a. m. Some of the party failed to be at the

breakfast-table, but the fine weather through the day brought them out. Lat. at noon, 49° 41′ N.; long., 52° 50′ W. 4 p. m., fine weather. Some of the party enjoyed themselves at revolver shooting at targets thrown from ship. 6 p. m., wind turning to the S. W. Set all square sails. Midnight, moderate and fine; engines going full speed.

THURSDAY, JULY 7, A. M.—Begins moderate, breeze from S. W. and fine. 3 a. m., fresh breeze from west, all possible sail set. Engines going full speed, all hands showed themselves at table at 8 a. m. in good spirits. Noon, sun obscure. Latitude by account 52° 19′, longitude by account 52° 20′ W. 4 p. m., weather fine, water very smooth. Mr. Bryant and Entrikin succeeded in climbing to the crow's nest amid shouts and laughter from the rest of the party. 4 p. m., crew employed shifting coal from the hold to the bunkers. Midnight, light airs and fine, engines going full speed.

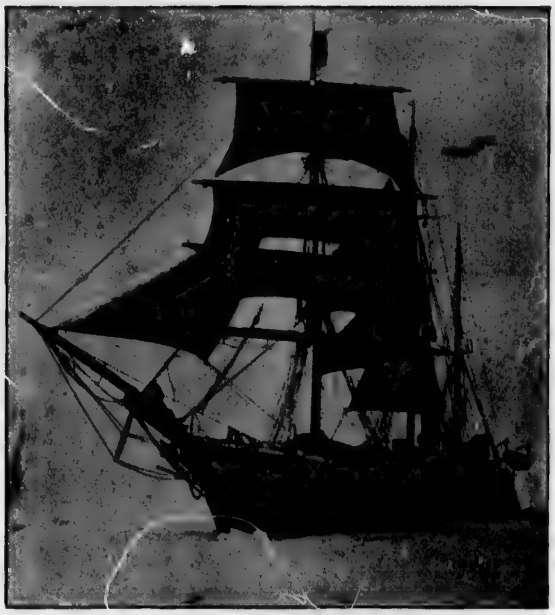
FRIDAY, JULY 8, A. M.—Begins as yesterday. 4 a.m., fresh breeze from the southward. Set all possible sail. 6 a.m., rain. 8 a.m., breeze freshening, rain held up, water very smooth. All the party on deck practising shooting, reading, etc. Noon, cloudy, sun obscure. Latitude by account 55° 13′ N., longitude by account 51° 55′ W. P.M., crew employed shifting coal to bunkers. 2 p. m., sudden change from E. N. E., stowed square sails. 6 p.m., light breeze and murky. 8 p.m., brisk breeze from the southward. Set square sails. Midnight, cloudy, engines going full speed.

SATURDAY, JULY 9, A. M.—Begins brisk. Breeze from the southward, and cloudy. Water smooth, all possible sail set. 8 a. m., ditto weather. Noon, cloudy, thick fog. Latitude by account 58° 6′, longitude 51° 55′. 4 p. m., do. Mr. Artist Stokes busily engaged sketching ship's spars and canvas. 8 p.m., Professor Heilprin delivered a lecture in the saloon on Greenland, which was very interesting to the party. Midnight, light airs and variable thick fog. Engines going full speed.

SUNDAY, JULY 10, A. M.—Begins as yesterday. Stowed square sails. 4 a.m., do. Clear at times and fresh breeze from the southward. Set square sails, water smooth, thick fog. 2 p. m., met scattered ice, slowed down to half speed, hauled in patent log. 3 p.m., clear of ice, put out log. 6 p.m., going through loose ice one hour and fifteen minutes, put out log. Midnight, very thick fog, going half speed.

MONDAY, JULY 11, A. M.—Begins as yesterday. 6 a.m., lifted little, went full speed. 11 a.m., met thick ice; went slow, very thick, hauled in log. Noon, ditto. No observation, going slow through loose ice to the eastward. 2 p. m., dense fog, ice getting heavy and thick, stopped the engines, waited for fog to clear. 4 p. m., ditto. Crew employed in shifting coal to bunkers, relief party amusing themselves on an ice floe. 7 p.m., fog lifting, started following leads to the eastward towards the Greenland coast. Midnight, ice very heavy and close, stopped, fog lifted.

TUESDAY, JULY 12, A. M.—Begins heavy rain, ice close, turned ship's head to the westward, going through thick ice, slow. 5 a. m., went half speed. Stopped the engines to renew air pump and circulating pump valve. 9 a. m., started, steaming slow through loose



WAITING FOR A LEAD.

heavy ice to the northward up the Greenland coast. 10 a. m., sun came out for the first time in six days, light breeze from the northeast and bearing off. Noon, latitude by indifferent observation 63° 3½′. 2 p. m., got clear of the ice, steaming along the coast in north water towards Godthaab, fresh breeze from northeast and cloudy.

6 p. m., abreast of Godthaab. Midnight, light breeze and fine, abreast of Pisugfik. Engines going full speed.

WEDNESDAY, JULY 13, A. M.—Begins light breeze from the eastward and fine, steaming up the coast. 8 a. m., wind veered to the southward, coast shut in with fog, abreast of Sermersut. Noon, do. 8 p. m., light breeze and veering off the land, crew employed shifting coal to bunkers, all possible sail set, party enjoying an open air concert on the poop, pitching quoits, etc. 8 p. m., opposite Holsteinborg. 8 p. m., winds veering to the northeast, stowed the square sails and altered course to northeast by east ¾ east. Midnight, light breeze and thick over the land, engines going full speed.

THURSDAY, JULY 14, A. M.—Begins light breeze from S. E., thick heavy weather. 3 a. m., mist clearing off the land, saw the land, also a great many icebergs in our course. 6 a. m., fine. 8 a. m., saw Disko Island bearing east about fifty miles, steered for Godhavn. Noon, very fine. 5.30 p. m., took pilot and arrived at Lievely. 5.50 p.m., drooped anchor in the middle and put stern line ashore. 6.30 p.m., Professor Heilprin and some of the staff went on shore to visit the Governor, fired a salute on entering the port, which was answered by the Governor on shore. 9 p. m., light breeze from the northward and fine. Our friends, the mosquitoes, did not forget to pay us a visit with their music. 10 p. m., all the party returned on board, having specimens

collected for their departments. Artist Stokes busy sketching. Midnight, calm and clear. One Danish ship lying in the harbor.

FRIDAY, JULY 15, A. M.—Begins as yesterday. 6 a. m., ship's crew filling water, etc. 10 a. m., all the party left the ship for the shore, intending a day's traveling

ASSISTANT GOVERNOR CARSTENS, OF DISKO, IN THE "FULTON."

visiting the mountains and collecting specimens of interest. Noon, do. 4 p. m., small, raw, fresh breeze from S. W. 7 p. m., party came on board tired and hungry, bringing their collections with them. They no doubt did ample justice to their dinner. The Governor came with them and dined. 8.30 p. m., heavy rain. The Governor and all of the party returned to the shore on

business. 11 p. m., all came on board and were very glad to go to rest. Midnight, rain, cleared off fine.

SATURDAY, JULY 16, A. M.—Begins calm and fine. 9 a. m., party went on shore on business, orders to sail at noon, weather permitting, for Upernavik. Light breeze from the westward and fine. 1.30 p. m., party came on board bringing seal skin clothing, etc., also an Eskimo interpreter. 1.45 p. m., steamed out of the harbor, went full speed toward Upernavik. Numerous icebergs, light breeze from S. W. and light drops of rain. 7.30 p. m., put out log at Blaafjeld, South Point, brisk breeze from the southward, fog hanging over the mountains. 10 p. m., strong breeze, all square sails set, land closed in by fog. Midnight, rain holding up and clearing, passing Hare Island.

SUNDAY, JULY 17, A.M.—Begins wind moderating and weather clearing. 8 a. m., fine. Noon, light breeze and fine. Passed Svarten Huk. 4 p. m., passed Kangarsuk about four miles off, very few icebergs, steady breeze from the northward, etc., clear weather. 10.30 p. m., passing Sanderson's Hope, numerous icebergs. 11.30 p. m., arrived at Upernavik, fired the regular salute which was answered by hoisting the flag on shore. Anchored in eleven fathoms of water, twenty fathoms cable on the starboard anchor. Midnight, calm and fine.

MONDAY, JULY 18, A.M.—Begins as yesterday. 6 a.m., crew employed shifting coal to bunkers. 9 a. m., Professor Heilprin and party went on shore to pay the Governor a visit. Light breeze from the westward and fine.

11 a. m., party came from the shore. 11.30 a. m., weighed anchor and steamed out of the harbor. Fired a farewell gun from the ship, as is the custom on arriving and leaving port on this coast. 2 p. m., outside the island, shaped course N. E. by E. along the coast, fresh breeze from E. Found numerous icebergs. 5 p. m., passed Kangersuatsiak Island, wind increasing. 6 p. m., strong, heavy head wind ; making very little headway. Midnight, moderating, sea going down, altered ship's course to N. E. by E. N. E. for Duck Island. Ship going full speed.

TUESDAY, JULY 19, A. M.—Begins moderating, sea smooth, going full speed. 4 a. m., thick fog. 6 a. m., light breeze, thick fog. Slowed the engines to half speed. 7 a. m., distance run up for the island, stopped the engine, calm with thick fog. 8 a. m., saw the island, fog too thick for boat to land. The ship saw several very large icebergs. Ship stopped, waiting for fog to clear. 1 p. m., fog cleared off, steered for the island. 2.30 p. m., all the party landed to shoot birds and collect eggs. Ship lying off the island, fine, clear of fog. 5 p. m., sounded whistle calls and all on board, brought with them ninety Eider ducks and three geese, numerous icebergs. 5.30 p. m., started half speed, shaped our course N. E. for Cape York, light breeze from the southward. 7 p. m., light fog. 9.30 p. m., very thick, made a skirt of ice, stopped ship for fog to clear. Distance run from Duck Island is twenty-three miles, course N. E. Midnight, calm, with thick fog.

WEDNESDAY, JULY 20, A. M.—Begins calm with thick fogs. 5.30 a. m., fog cleared off, went ahead full speed. Jam of ice to the N. E., steamed more to the westward following the leads northward, light breeze from E. N. E. 6.30 a. m., fine open water, making straight course. 10.45 a.m., very heavy sheets, having to steam around them from N. W. to east, but making good our course. Noon, stopped for a quarter hour, loosened up, steamed in good water to N. E. 5 p.m., thick fog, made fast to a floe. 6 p.m., clearing little, no water to be seen north. Crew employed shifting coal to bunkers. Midnight, still lying to, light breeze from E. S. E., thick fog.

THURSDAY, JULY 21, A. M.—Begins light breeze from E. S. E., thick fog. 1.30 a. m., fog clearing off, steamed to N. W. around a heavy sheet. 3 a. m., got around the south corner, shaped course N. E. great deal of water to the north, going about six miles per hour. 9 a.m., very thick, made a heavy sheet, hove to, to await a clearing. 11 a.m., cleared a little, went ahead half speed around heavy sheets. Noon, do., distance made good to noon about thirty-five miles. 2 p. m., weather very thick, ice also thick, stopped the engine. Distance made in two hours about eleven miles. 4 p. m., clear, went full speed ahead to N. E. by E., long lakes of water. 8 p. m., thick fog, ice very thick and in large sheets. Stopped, distance made since 2 p. m. about twenty-seven miles, fresh breeze from E. S. E. Light snow. 11 p. m., fog clearing up, started full speed. Midnight, sighted Cape, bearing E. N. E.

FRIDAY, JULY 22, A. M.—Begins brisk breeze from E. S. E., light fogs at times, steaming towards Cape York in loose ice and lakes of water. 8 a.m., very thick, lying close to the shore. 9 a. m., strong breeze. Steamed to an Eskimo settlement. Eskimos crying *kimo* or *kirmo*, which means welcome. Made ship fast to the standing ice, visited by the whole village. Professor Heilprin distributed presents sent from Philadelphia, getting all the news he could ascertain of Lieutenant Peary and party through the interpreter brought from Disko. Noon, moderate weather, clearing off, numerous icebergs in the bay between the ship and Bushman's Island. Noon, top of the land covered with fog. 3 p.m., started for the northward. 5 p.m., very thick fog, stopped the engines to wait for a clear. 8 p.m., fog clearing off, went ahead north along the coast. 11 p. m., examined Conical Rock to see if any cairn had been put up, could find none, steamed away for Wostenholme Island. Midnight, steaming along by Petowik Glacier, fresh breeze from E. N. E.

SATURDAY, JULY 23, A. M.—Begins fresh breeze from E. N. E., clear. 5.30 a. m., passing the west end of Wostenholme. Saw a pole erected on shore. Stopped ship close by, party went on shore to see if they could find any records. 6.30 a.m., party came on board, found cairn with small cask containing records, which was put on board the whaler *Eskimos*, captain Phillips, to be landed here, if possible; took copy of captain's note

and left the cask and a record in same place. Noon, passed Cape Parry. 2.30 p.m., hove to, off Ittiblu, some kajaks came off from the Eskimo village. Professor Heilprin and party went on shore. Light breeze from the eastward and fine, the ship laying off. 4 p.m., professor came on board, sent on shore sledges, also a lot of lumber and other useful articles for the natives, also gave them from the ship a lot of powder and gun caps which were greatly in demand, there were only three gun caps in the whole village, the population of which is forty. 6.30 p.m., all business being done there we started for McCormick Bay. 8.30 p.m., passed around the west corner of Herbert Island. 11.30 p.m., arrived at McCormick Bay, the winter quarters of Lieutenant Peary and party. Messrs. Gibson, Cook and Verhoeff and several Eskimos came to visit the ship coming to the station. Midnight, light airs S. W. and fine. Numerous icebergs in the bay, too numerous to anchor, laid by in the bay. Lieutenant Peary and Astrup not returned from their travel north. Mrs. Peary and colored servant camped at the head of the bay.

SUNDAY, JULY 24, A. M.—Begins calm and foggy. 1 a. m., Professor Heilprin and party went on shore with shore party. 3 a. m., professor came on board, steamed ship a little in the ice, made fast to the winter standing ice. 8 a.m., do. No duty, being the Sabbath. Noon, sent boat for the shore party to come on board to dine. 7 p.m., ice broke off, shifted to another berth. Midnight, fine.

MONDAY, July 25, A. M.—Begins calm and fine. 6 a. m., crew employed shifting coal to bunkers. 9 a. m., Professor Heilprin left to pay Mrs. Peary a visit at the head of the bay, twelve miles up. Noon, finished coaling, filling water, etc., etc. Ship moored to a small iceberg. Still calm. 8 p. m., do. Midnight, do., do.

HUMMOCKY ICE—THE "KITE'S" FURTHEST POINT NORTH.

TUESDAY, JULY 26, A. M.—Begins calm, ship still moored to small iceberg. 5.30 a. m., the walrus hunting party returned, brought one reindeer and one seal. Party being pretty well used up soon went to their beds but not till they had their usual feed. Weather calm and very fine. 9 a.m., Professor Heilprin returned, slipped from the iceberg and steamed away for Littleton Island, light

breeze from S. W. and fine. 6.45 p.m., passed Cape Alexander. 8.45 p.m., stopped at Littleton Island, strong breeze from east, steamed on towards Humboldt Glacier. Midnight, moderate and fine. Ship stopped by a solid barrier of ice reaching across Smith Sound from Cape Sabine to Cape Inglefield.

WEDNESDAY, JULY 27, A. M.—Begins calm and fine. 1 a. m., saw several walruses in the water, also some on the ice. The relief party manned a boat and went away after them. 4 a.m., returned, having captured four. Thick fog. Hauled them on a piece of ice and skinned them. 10.30 a.m., calm and clear, finished skinning, took them on board and steamed south for Littleton Island. All the party went on shore shooting walrus, hunting, etc., etc. 6 p.m., party all on board, brought one young walrus, started to visit an Eskimo village at Port Foulke, Hayes's winter quarters. Several walruses on pieces of ice, boat went after them, but did not succeed in getting any. Killed one from the ship and got it on board. 11 p. m., party returned satisfied the village had been deserted. Brought a few relics from Hayes's winter quarters, steamed south to call at Sontag Bay. Midnight, rounded Cape Alexander, bound south, calm and fine.

THURSDAY, JULY 28, A. M.—Begins calm and fine, steaming easy. 3.30 a.m., arrived off Sontag Bay, stopped the engine, lay by, lot of loose ice along the coast. 9 a.m., party went on shore, ship laying off. Noon, party returned, found a deserted Eskimo village, brought with them a lot of relics from American or English ships,

one button was found having the letters thereon "U. S. N.," also brought a lot of Eskimo skulls from the graves. 4 p. m., party starts for the shore, taking with them a toboggan, and each a small bag of clothes with provisions, to try to get up a glacier, intending to return about midnight. 10 p. m., party came off to the ships, not having been able to climb the glacier, had supper and started for the shore again to try it in another direction. Midnight, calm and fine, ship still lying to.

FRIDAY, JULY 29, A. M.—Begins as yesterday. 8 a.m., light breeze from S. E. and cloudy, party not returned. 11.30 a.m., party returned, succeeded in climbing glacier, and walked a few miles to the inland ice, absent from the ship thirteen and a half hours. Started towards Cape Robertson at 2.30 p. m., a bay inside not named on the chart, steamed in. Professor and two of the party landed to examine some deserted Eskimo huts, after landing, found one family in a hut, brought them on board, gave them some lumber and other serviceable articles, and left at 8 p. m. for McCormick Bay, where we arrived at 11 p. m. Anchored in ten fathoms of water, thirty fathoms cable, close in shore opposite Peary's winter quarters. Midnight, calm and fine, kept watch as at sea, numerous icebergs drifting in the bay.

SATURDAY, JULY 30, A. M.—Begins as yesterday. 6 a. m., crew employed shifting coal to bunkers, etc. Noon, ditto. 2 p. m., started to Robertson Bay to land a party on a deer-hunting excursion. 4.30 p.m., at the point desired, where Mr. Bryant, Dr. Mills, Mr. Meehan and Mr. Entrikin and Eskimo Daniel went on shore,

having a week's provisions, left one of the ship's boats with them to return. Turned ship about and steamed back to McCormick Bay, where we arrived at 7 p. m., and anchored at our usual anchoring place. Weather calm and fine. Midnight, ditto.

SUNDAY, JULY 31, A. M.—Begins as yesterday. Weather surprisingly fine. No duty to-day, being the Sabbath. We get our usual complimentary visits from the Eskimos. Three of Peary's party dined aboard. Continued fine throughout the twenty-four hours.

MONDAY, AUGUST 1, A. M.—Begins as yesterday. 6 a. m., commenced clearing ship, etc., and still at anchor. Still awaiting the arrival of Lieutenant Peary from his journey. Artist on shore painting, hunting party not returned. End with very fine weather. Numerous white whales going up the bay.

TUESDAY, AUGUST 2, A. M.—Begins as yesterday. Calm and very fine. 6 a. m., cool, employed on the rigging and other work. Prof. Heilprin and Vorse went in boat to collect starfish, but got very few specimens. Noon, ditto weather. 4.15 p.m., hunting party returned from Robertson Bay ; secured only six Arctic hares. Weather continues very fine. 8 p. m., all the party went on shore to play a game of base-ball. 11 p. m., all the party came on board and retired.

WEDNESDAY, AUGUST 3, A. M.—Begins as yesterday. Calm and fine. 10 a. m., party went on shore to enjoy themselves, seemed to be nothing particular. Crew filling water, saw a fine small salmon at the mouth of the stream. P. M., Eskimos went hunting seals in their

kajaks, secured one bearded seal and one young white whale, of which the naturalists secured the skeleton. The sport was enjoyed very much by all. No sign of Lieut. Peary arriving. Midnight, calm and fine.

THURSDAY, AUGUST 4, A. M.—Begins as yesterday. 9 a. m., hove up and steamed to the head of the bay. Mrs. Peary and colored servant, Matthew, joined the ship. 11.45 a. m., anchored at the head of the bay, ten fathoms of water, muddy bottom. Saw a great quantity of white whales. 1 a. m., party landed to hunt, collect specimens, etc. 5.30 p. m., all the party returned on board and remained. Midnight, moderate breeze from the N. W. and fine.

FRIDAY, AUGUST 5, A. M.—Begins moderate and cloudy, fog covering the top of the land. 6 a. m., thick fog which continues until 11 a. m. Noon, fog cleared off. Chief Mate, Second Engineer and one seaman on shore hunting for game. Party preparing sign-post to take to the inland ice to direct Peary on his way to the ship. 1 p. m., all the party left the ship to carry out their intention as to putting the posts. 5.30 p. m., mate arrived from hunting, got but few birds. Saw three deer and several wild geese, but could not get near them. 10 p. m., dense fog. Calm. Midnight, do. weather.

SATURDAY, AUGUST 6, A. M.—Begins calm and fine. 4 a. m., heard guns firing on shore, boat coming bringing the relief party, who went to put up signal staffs, also Lieut. Peary and companion, Astrup, who accompanied

him in his travels north. We hoisted ship's flags, and they reported they had accomplished the work they had expected when they started. They brought five dogs out of sixteen they had when they started on the journey, having to kill the other eleven for food for the remaining ones. Lieut. Peary and Astrup in good health and looking well. 8 a. m., calm and fine, and all the party taking a rest. Ship still lying at anchor at the head of the bay. Noon, fresh breeze from E. N. E. Paid out chain to thirty fathoms. 7 p. m., Lieutenant Peary asked for ship's crew to go on shore and assist him to bring his luggage from the top of the cliffs, which was willingly done. Relief party too much fatigued to go. 11.30 p. m., arrived on board with all his effects. Midnight, strong breeze and fine.

SUNDAY, AUGUST 7, A. M.—Begins as yesterday. 8 a.m., all very quiet. Noon, strong breeze from east, gave chain to forty-five fathoms. 2 p.m., Lieutenant Peary, Professor Heilprin and party started for the shore. After one hour rowing had to return, drenched with water, not being able to remain on shore. 3 p. m., ordered steam at hand in case of ship drifting. Blowing heavy. 4 p. m., anchor started, ship drifting towards shore, went easy ahead, hove up the anchor and steamed to the weather side of the bay, and lay by. 6.30 p. m., started moving down the bay, engines going slow. 7 p. m., struck on a shoal and lodged. Sounded around the ship and found that she was only caught on the fore foot. Shifted a little cargo from forward, engines going full

THE "KITE" IN McCORMICK BAY.

speed astern, saw a piece of false keel float up alongside. 8 p. m., slid off the shoal, ship making no water, still blowing heavy, lying in deep water. 10 p. m., moderating a little. Started down the bay towards the station, when about half way down, the wind getting quite moderate, laid by. 10 p. m., started down the bay, engines going slow. Midnight, blowing heavy, stopped the engines and let the ship drive down the bay towards the station.

MONDAY, AUGUST 8, A. M.—Begins blowing heavy from E. N. E. out the bay. Ship drifting down. 6 a.m., abreast of the station, close to, heavy surf on the beach, too much to land, lay forth and back waiting for it to moderate. Noon, no wind, clear sky. 1 p. m., moderated a little. Ships crew landed. Lieut. and Mrs. Peary inside of Cape Cleveland about two miles south of the station. 2 p. m., still blowing. 4 p. m., winds moderating. Midnight, calm.

TUESDAY, AUGUST 9, A. M.—Begins calm and cloudy. Ship lying by in the bay. 9 a. m., steamed in close to the station and anchored expecting to take on board Lieutenant Peary and his effects, but were greatly disappointed finding him and his party were going away in their boats on a hunting excursion of a week's duration. Professor Heilprin and some of his party dredging for specimens of sea insects, crew employed filling water, etc. 4 p. m., still calm and cloudy. A few blossoms of snow fell. Heilprin and party busy getting ready to go by boat on a hunting tour to Inglefield Gulf

or Herbert Island. Midnight, light breeze from S. E., with small rain.

WEDNESDAY, AUGUST 10, A. M.—Begins light breeze from S. S. W., with rain. 4 a. m., ditto weather. 6 a. m., heavy rain. 8 a. m., cleared off a little, crew employed shifting coal to bunkers. 9.30 a. m., party left the ship for hunting tour. Noon, wind increasing with heavy rain. 4 p. m., blowing hard, still raining heavy. 6 p. m., heavy gale, gave chain to forty fathoms. 7 p. m., anchor drove, steamed ahead slow whilst heaving up the anchor, no use to give more chain, drove off in deep water, heavy squalls off the land kept the ship dodging forth and back under the land. 9 p. m., moderating a little, rain holding up. Midnight, moderate.

THURSDAY, AUGUST 11, A. M.—Begins moderate, thick, cloudy weather. 4 a. m., calm. 8 a. m., ditto, ship lying by in the bay, none of the hunters returned, crew employed at work on the ship. Noon, ditto weather. 4 p. m., heavy rain. 8 p. m., ditto. 10.30 p. m., sudden squall from E. S. E. Midnight, more moderate, thick, cloudy weather.

FRIDAY, AUGUST 12, A. M.—Begins strong breeze from S. S. W., and cloudy. 4 a. m., light showers. 9 a. m., moderate light showers of snow, steamed in close to the shore and anchored in ten fathoms of water. Thirty fathoms cable. Noon, light variable winds, very heavy sky. 4 p. m., thick snow. 8 p. m., ditto weather. Midnight, light breeze from E. S. E., and freshening,

still snowing a little, none of the hunting parties arrived.

SATURDAY, AUGUST 13, A. M.—Begins freshening breeze from S. S. E., very heavy sky. 1.30 a. m., Professor Heilprin and party returned in ship's boat, brought with them as specimens three walrus heads, which they obtained whilst hunting. 4 a. m., strong breeze, still snowing. 8 a. m., blowing heavy, anchor holding good, gave a few fathoms more chain. 10 a. m., moderating, sky clearing. Noon, fine, strong winds. 4 p.m., do. weather, no sight of Mr. Peary's party arriving. Midnight, calm and fine.

SUNDAY, AUGUST 14, A. M.—Begins as yesterday. 4 a. m., one of party's boats killed one reindeer and one seal. 8 a. m., calm and very fine, no duty on board ship, being the Sabbath. Professor Heilprin and some of his party away dredging for specimens of shell fish. Secured some very fine ones. Noon, fine. 4 p.m., cloudy. 8 p.m., fresh breeze from the southward with rain. Midnight, winds increasing. Continues to rain heavy.

MONDAY, AUGUST 15, A. M.—Begins blowing heavy from S., S. W. with heavy rain. 8. a. m., rain holding up, wind increasing, gave chain to sixty fathoms. Noon, moderating a little, landed to-day. 9 a. m., clearing up and moderating, but hard squalls at times. Midnight, do. weather.

TUESDAY, AUGUST 16, A. M.—Begins with hard squalls from S. S. W. with rain. Showers. 6 a. m.,

moderating and clearing off fine. 10 a. m., calm and fine, commenced taking some of Peary's stores on board, boat not arrived yet. A large lot of icebergs and drift outside the bay. Noon, light, variable airs and fine. 4 p. m., cloudy. Hove in slack chain to thirty fathoms. 6 p. m., rain, but still light airs and continuing till midnight.

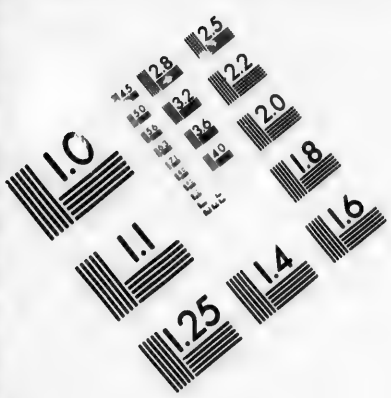
WEDNESDAY, AUGUST 17, A. M.—Begins light, variable airs, with heavy rain. 4 a. m., sudden squall from the southward gave chain to fifty-five fathoms. 6 a. m., still hard squalls. 8 a. m., moderating, thick, cloudy weather. Noon, light, variable winds, clearing off fine. Hove up slack chain to thirty fathoms. Peary's boat not arrived. 6 p. m., sudden squalls from the southward, paid out chain to fifty-five fathoms. 8 p. m., heavy gale. 9 p. m., Peary arrived from Inglefield Gulf, wind moderating. 11 p. m., moderate and fine. Midnight, calm.

THURSDAY, AUGUST 18, A. M.—Begins calm and fine. 4 a. m., do. weather. 9 a. m., commenced taking Lieutenant Peary's things on board. Second boat returned from the head of the bay, which had been away in search of one of their party that went hunting and had not returned. Got a search party to look for him. Lieutenant Peary and some Eskimos going to the head of the bay. Ship started at 2.30 p. m., with four Eskimos and Dr. Cook on board for Robinson Bay to start in that direction, thinking he might be there, as two Eskimo families reside there. 5.30 p. m., arrived

and went on shore. He had not been seen. Steamed to the east side of the bay and sent four parties away in different directions on the search, ship lying in the bay waiting. 8 p. m., calm and cloudy. 11 p. m., three of the party returned having shot two reindeer, brought two skins and one carcass of the meat. Midnight, calm and fine.

FRIDAY, AUGUST 19, A. M.—Begins calm and fine. 2.30 a. m., all the party returned, bringing no tidings of the missing man Verhoeff. Let the ship lay to in the bay. 9 a. m., steamed slowly all around the bay examining the shore very closely for the missing man. Noon, turned the outer point toward McCormick Bay, still examining the coast close, great deal of scattered ice in the mouth of the bay. 2 p. m., arrived nearly at the head of the bay where Peary's camp was pitched. Saw that all his company were there. Professor Heilprin went on shore, they had not seen anything of the missing man, held a consultation as to the next mode of search and concluded for all parties to start in different directions going by twos and threes. 7.30 p. m., left the ship for the search, anchored at the head of the bay, ten fathoms of water, thirty fathoms of cable on large anchor. 10 p. m., light variable airs, fog coming in the bay. Midnight, fresh breeze, thick murky weather.

SATURDAY, AUGUST 20, A. M.—Begins as yesterday. 7.30 a. m., Heilprin's party returned to the ship very fatigued. Crew employed shifting coal to bunkers, filling water, etc. Noon, do. weather. 6 p. m., foggy on the



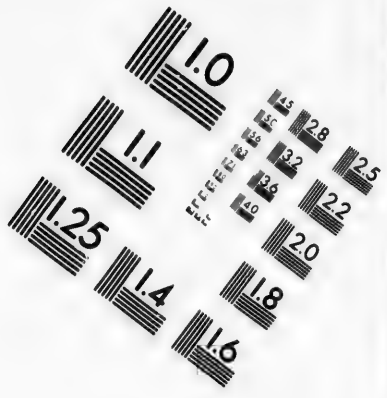
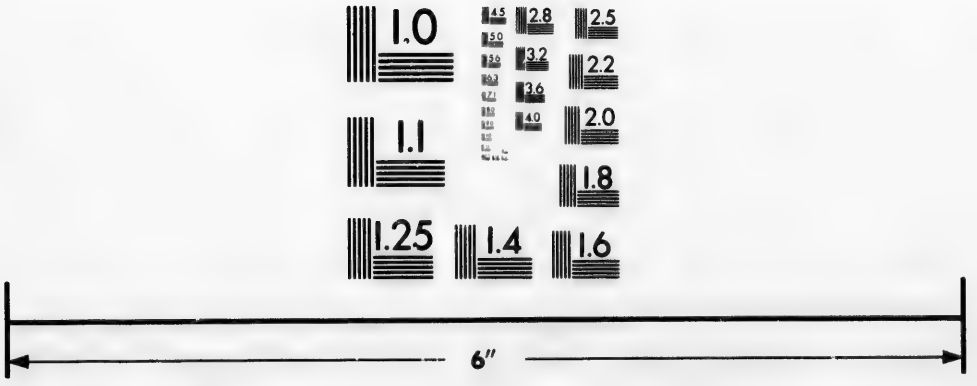
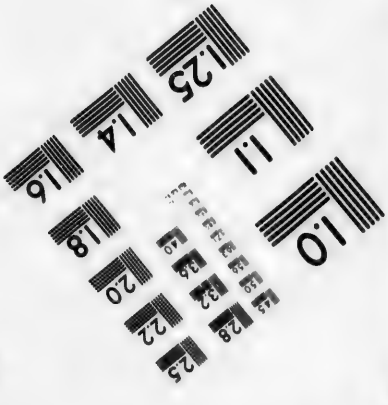


IMAGE EVALUATION TEST TARGET (MT-3)





Photographic Sciences Corporation

23 WEST MAIN STREET
WEBSTER, N.Y. 14580
(716) 872-4503

shore, attended with rain. 11 p. m., fog clearing off. Professor Heilprin divided his men, sending a search party on each side of the bay. Thick, cloudy weather. Midnight, weather the same.

SUNDAY, AUGUST 21, A. M.—Begins as yesterday. 4 a. m., winds north, light, thick murky weather. 7.30 a. m., Heilprin's search party returns to the ship, met three of Peary's search party but no tidings of the missing man. 10.30 a. m., Peary and four Eskimos came to the ship after forty hours' searching for the missing man Verhoeff, bringing no tidings. Mate and four of the crew started from the ship at 9.15 a. m. to search about the mountains near the ship. Noon, Peary left again for Robinson Bay to skirt the shore in boat. 4 p. m., calm and fine. Mate and party arrived with no tidings. 5 p. m., hove up anchor and started for Robinson Bay, calling on the way to take on board two Eskimos, also calling at Peary's station to communicate with Mrs. Peary. 11 p. m., arrived on the west side of the bay. Professor Heilprin went on shore to native Igloo to try to ascertain from the Eskimos if there was anything seen of the missing man. After a short time returned on board with no tidings. Moved ship up to head of the bay. Midnight, calm and fine, laying by.

MONDAY, AUGUST 22, A. M.—Begins calm and fine. 1.30 a.m., Lieutenant Peary and boat's crew came to the ship to arrange with Professor Heilprin as to the day's search. 6 a. m., calm and very fine. 9.30 a. m., both parties left for the shore, Peary going to meet a party

that were traveling on the search from the head of McCormick Bay across to the head of Robinson Bay. Noon, calm and very fine. 8 p. m., Lieutenant Peary and two Eskimos came to the ship bringing with them one of Heilprin's men disabled with a sprained knee. 11 p.m., Heilprin and all of both parties arrived having found traces of the missing man. Saw his tracks and other tracks to convince them he has passed along, but no sign of him. Concluded to make one more search to-morrow. Midnight, calm and fine.

TUESDAY, AUGUST 23, A. M.—Begins as yesterday, still lying by in the bay. 10 a. m., Peary's party left for the shore for another search. Strong breeze from the southward and fine. Noon, ditto weather. 1 p. m., Professor Heilprin and his party left for the shore. Winds moderating a little. 4 p. m., weather the same. 5.30 p.m., Peary's party returned getting no further trace of Verhoeff. 8 p. m., Heilprin and party returned with same result. Held a consultation and agreed by all parties that nothing further could be done. 9.15 p. m., started for Peary's station in McCormick Bay, leaving a cache of provisions at Kern Point, near Cape Robertson in case the man should turn up after the ship had left. 11 p. m., arrived at the station, anchored close to the shore, twelve fathoms of water. Midnight, calm and fine.

WEDNESDAY, AUGUST 24, A. M.—Begins as yesterday. 9 a. m., commenced taking Peary's things on board. 2 p. m., all on board, hove up and started southward, bound full speed. 4 p. m., passed west end of Herbert

Island. Numerous icebergs drifting out of Inglefield Gulf. 6 p. m., calm and fine. Ship going full speed. 7.45 p. m., passed Cape Parry. Fresh breeze from W. S. W. Steering for Saunders' Island. Midnight, light breeze from S. W. Thick, hazy weather.

ICE-BERGS IN WHALE SOUND.

THURSDAY, AUGUST 25, A. M.—Begins calm and fine. 1.15 a. m., passed the north end of Saunders' Island going towards North Star Bay to Eskimo settlement. 3.45 a. m., off the mouth of the bay, which was full of ice and not able to get in. Turned ship out and steamed full speed for Cape York, loose panned ice all along the south part of the bay. 3 a. m., passed Cape Atholl. 9 a. m., at Conical Rock. Heavy icebergs in abundance,

also drift ice very thick. Noon, strong breeze, hauled ship to the southward where ice was looser and icebergs not so thick. 4 p. m., strong breeze from S. W. with rain. Hauled ship to S. W. No possibility of getting to Cape York, decided to proceed to Disko. 6 p. m., Cape York E. by S. about forty miles. 7 p. m., wind south, light snow showers, a very little ice in sight to the S. W. 10 p. m., ice thick. Strong breeze with snow showers. Midnight, got in good lakes of water. Weather ditto.

FRIDAY, AUGUST 26, A. M.—Begins wind moderating. Steaming through large lakes of water and skirts of ice. 8 a. m., calm with light snow. Steaming through lakes and loose ice to S. W. following the leads as near the the course as possible. Noon, thick cloudy weather. Ice thick. 2 p. m., saw a Polar bear on an ice floe, turned the ship towards him, and after a volley of twenty-five rifle shots, we killed him. Steamed along-side the floe and hoisted him on board. 4 p. m., shot a hooded seal, lowered the boat and brought it on board. Both the seal and bear were skinned for specimens for the Academy. Light breeze from the S. E. Ice scattered. 9.30 p. m., fresh breeze, got clear of ice, course S. W. by S. Cloudy weather. Lamp lit in the cabin at 9.30 p. m. for the first time since July 12. Midnight, ditto weather, ice scattered.

SATURDAY, AUGUST 27, A. M.—Begins fresh breeze from the southward and thick cold weather. 1.30 a. m., got clear of the ice. Course S. W. by S. Steaming

about six knots. 8 a. m., moderate weather with thick fog, going full speed. Noon, calm, fog clears a little. Sun showing at times. Latitude, by indifferent observation, 72°. Altered course to south. 4 p. m., rain, thick fog. 8 p. m., weather the same. Went dead slow. Heavy rain. 11.30 p. m., sudden squall from S. W. Saw Kingartak Island on port bow and Disko Island on starboard bow. Course S. W. Went ahead full speed. Midnight, strong wind and cloudy.

SUNDAY, AUGUST 28, A. M.—Begins increasing wind and sea from S. W. 4 a. m., ship laboring against a heavy head, and making very little headway. Turned ship's head toward Disko Island, close to the land. 8 a. m., passed between the island and the main land along the coast toward Sigguk Point, going south. Wind getting moderate to N. W. 11 a. m., passed the point. 11.30 a. m., passed Cape Crouston, winds N. E., light, thick, cloudy weather; numerous icebergs. Shaped course S. W. by W. for Waigate Strait. Wind freshening, wind moderating and clearing up. Steamed over toward Disko Island, taking the strait. 10 p. m., squally weather, with showers of sleet, snow and hail, which continued until midnight.

MONDAY, AUGUST 29, A. M.—Begins strong breeze from southward, with showers of sleet. Close to north side of Disko Island. Steering half-speed through the strait. 2 a. m., more moderate and weather clearing. Went full speed, heavy current setting northward through the strait. 4 a. m., winds increasing to strong,

not making much headway. 6 a. m., moderating. 10 a. m., anchored in a small harbor at the south end of the strait on the east side. All the parties went on shore collecting specimens. Moderate breeze and cloudy. 4.30 p. m., parties returned on board, bring a large collection of fossils. 6 p. m., nothing more to do. Hove up and started for Lievely or Godhavn. Strong breeze from S. W. from nine o'clock until midnight. Midnight, blowing strong, with showers of snow and sleet.

TUESDAY, AUGUST 30, A. M.—Begins strong wind, with showers of snow. Passed around S. E. corner Disko Island. 8.30 a. m., anchored at Lievely. Saluted the inspector by firing our small cannon, which was answered with six from the shore. 11 a. m., fine weather. Inspector, wife and daughter paid the ship a visit, invited the party on shore and left. Crew busily employed shifting coal to bunkers. 4 p. m., light breeze from the westward and very fine. 5 p. m., finished coaling, cleared up decks and finished work for the day. Midnight, calm and fine.

WEDNESDAY, AUGUST 31, A. M.—Begins as yesterday. 8 a. m., light breeze from the southward. Crew employed filling water. Employed Eskimo to put twenty tons ballast on board. Noon, showers. 4 p. m., snow. 6 p. m., fresh breeze from the southward. 8 p. m., calm and fine. Midnight, same weather.

THURSDAY, SEPTEMBER 1, A. M.—Begins calm and fine. 3 a. m., hove up and steamed out of Godhavn

bound south to Godthaab. 8 a. m., fresh breeze from N. W. Set all fore and aft canvas. Noon, fine; latitude 68° 34′ N. Steaming seven miles per hour. 4 p. m., same weather. Midnight, same weather.

FRIDAY, SEPTEMBER 2, A. M.—Begins calm and fine. 2 a. m., saw a small string of ice. Hove to for daylight. 4 a. m., went ahead full speed down the coast. No ice in sight but a few bergs. 8.30 a. m., took on board an Eskimo pilot and steered for the harbor. 9 a. m., six more Eskimos got on board, took their kajaks on deck and went full speed for the port. Fresh breeze from the N. W., and fine. 11.30 a. m., anchored at Godthaab ship's haven, seven fathoms of water, twenty fathoms of cable on port deck. Was visited by the Governor and staff. 2 p. m., all the party went on shore. Crew employed filling bunkers, filling water, etc. 10.30 p. m., all the party returned; seemed to have enjoyed their visit on shore. Midnight, calm and fine.

SATURDAY, SEPTEMBER 3, A.M.—Begins as yesterday. 9 a.m., all the party went ashore. Ship at anchor in Godthaab ship's haven. Midnight, light airs from N. E. All the party returned.

SUNDAY, SEPTEMBER 4, A. M.—Begins calm and fine. 9 a. m., light breeze from N. E., all the party went on shore to attend public worship. 1 p. m., some of the party returned on board and others stayed on shore. 3 p. m., all went on shore and attended church, all dined on shore, after which the day was finished with a

dance. Midnight, fresh breeze from the eastward, and cloudy.

MONDAY, SEPTEMBER 5, A. M.—Begins as yesterday. 12.30 a. m., all the party came on board delighted with the day's doings. 9 a. m., got up steam and weighed anchor, and steamed around opposite the inspector's settlement where all the party went on shore at 10.45 a. m. Noon, the party returned from the shore, inspector, governor and minister, also their wives and friends remained half hour and left for the shore with a salute from our gun, was also answered on shore with cheers and waving of handkerchiefs. Steamed out of the bay. 1.30 p. m., passed Jakobsholm Island, put out patent log and set course W. by S. Winds north and strong, with passing clouds. Set main topmast and middle fore topmast stay sails. 3 p.m., set lower and upper topsails, passing several icebergs. 8 p. m., fifty miles, strong breeze from north, and cloudy. Distance run from 8 p. m. to midnight, thirty miles, fresh breeze and cloudy.

TUESDAY, SEPTEMBER 6, A. M.—Begins strong breeze from the northward, and cloudy. 4 a. m., moderate. 6 a. m., light breeze from N. W. Stowed the topsails. Noon, light breeze from the southward. Sun obscure. 3 p. m., breeze up from S. E. Set the lower and upper topsails, all fore and aft canvas set. 4 p. m., breeze increasing, with cloudy weather. Set foretop gallant sail. 8 p. m., winds increasing. Stowed top-gallant sail and upper-top-gallant sail. Midnight, stowed

gallant and maintop-gallant stay sails. Wind increasing with snow showers.

WEDNESDAY, SEPTEMBER 7, A. M.—Begins wind increasing. Mist showers from the eastward. 4 a. m., gale northerly with heavy head sea shipping much water, stowed upper topsails. 8 a. m., strong gale from E. N. E., with rain. Course S. W. by W. Noon, winds N. E., still blowing, clearing up, altered course to S. W. by S., making seven and one-half knots per hour. 6 p. m., moderating, sky clearing. 10 p. m., moderating. Set upper topsail and main top-gallant stay sails. Midnight, fine, set gaff topsail and spanker.

THURSDAY, SEPTEMBER 8, A. M.—Begins steady breeze and fine. Course S. W., making seven and a half knots per hour. 2 a. m., showery. 8 a. m., sky cleared very fine. Noon, do. weather. Latitude observation 55° 53′ N. P. M., crew employed shifting coal to bunkers. 6 p. m., calm, saw the land bearing W., which proved to be Cape Harrison, about twenty miles distant. Altered course to S. by E. 8 p. m., light breeze from S. by W. Stowed fore and aft canvas, going full speed. Cloudy weather. Midnight, light breeze from the eastward and cloudy.

FRIDAY, SEPTEMBER 9, A. M.—Begins light breeze from the eastward and cloudy. Set fore and aft canvas. 2.30 a. m., passed a barkentine bound north. 6 a. m., sky clearing. 10 a. m., fine. Noon, do. weather. Saw Woolf Islands bearing N. W. Latitude observation 53° 39′ N. 1.40 p. m., passed around Hill

Island. Set patent log course S. W., one-half S. Wind N. by E. Steady breeze. Saw several schooners running south on the inside. 4.30 p. m., Hawks Island at W. by N. ten miles. Altered course to S. by W. Fresh breeze from the northward. 8 p. m., fine. Several fore and aft schooners in company bound south. Midnight, light breeze and fine.

SATURDAY, SEPTEMBER 10, A. M.—Begins light breeze from the northward and fine weather. 2 a. m., passed two steamers bound east. 4 a. m., weather do., fresh breeze. Set all possible sail. Ship making seven and a half knots per hour. All our party on deck employed cleaning paint work, etc. Midnight, steady breeze and fine. Altered course to S. S. W.

SUNDAY, SEPTEMBER 11, A. M.—Begins steady breeze and fine. 8 a. m., altered course to S. W. by W. Saw Baccalieu bearing S. W. by W. one-half W. 11.30 a. m., passed south end of Baccalieu. 4.30 p. m., arrived at St. Johns, hauled ship to owner's wharfend. Midnight, calm and fine. Night watchman employed from the shore.

MONDAY, SEPTEMBER 12, A. M.—Begins moderate breeze and fine. 8 a. m., do. weather. Noon, employed a diver to examine the ship's bottom. After a careful examination reported nothing serious amiss. Lloyd's surveyor passed her to make a voyage to United States. Midnight, fine, night watchman employed.

TUESDAY, SEPTEMBER 13, A. M.—Begins moderate breeze from the westward and fine. 6 a. m., shifted

around to berth for coaling. 8 a. m., people employed from the shore putting coal on board. 4 p. m., finished coaling. 6 p. m., watchman employed from the shore. Midnight, moderate and fine.

WEDNESDAY, SEPTEMBER 14, A. M.—Begins clear. Employed getting ship ready for sea. Noon, light breeze from S. E. 4 p. m., backed out from the wharf with pilot on board. Steamed down the harbor amid cheers and waving of handkerchiefs from the people on shore. 4.30 p. m., passed through the Narrows. 5 p. m., passed Cape Spear and shaped course S. W. ½ S. Put out patent log. Fresh breeze from W. S. W. 10 p. m., passed Fairyland Head Light. Midnight, thick, hazy weather.

THURSDAY, SEPTEMBER 15, A. M.—Begins fresh breeze from S. W. Thick, hazy weather. 2 a. m., clear. Cape Race light W. N. W. about six miles. 8 a. m., thick fog, whistle blowing at short intervals. 10 a. m., fog lifted, saw a schooner bound east, lumber laden. Noon, passing fogs, fresh breeze from the southward. Set all fore and aft canvas. Engines full speed. Est. distance run from Cape Race seventy miles, course W. ½ S. 4 p. m., winds increasing. 6 p. m., rain showers with strong breeze. Furled upper main-top-gallant-staysail and gaff-topsail. Midnight, heavy rain.

FRIDAY, SEPTEMBER 16, A. M.—Begins strong breeze from the southward. Heavy side sea. 2 a. m., heavy rain attended with much lightning to the southward.

Stowed lower main-top-gallant-staysail and standing jib. 8 a. m., rain clearing off. Noon, sudden change from the westward. Stowed all fore and aft canvas. Heavy side roll. Whole distance made from yesterday noon, 141 miles. Ship going her course W. ½ S. 2 p. m., fresh breeze from W. N. W. and clear sky. Sea falling down. 4 p. m., sounded twenty-one fathoms, gray sand and shells. 8 p. m., fresh breeze from the westward. Ship steering four knots. Sounded twenty-three fathoms on south part of Banquereau. Midnight, do. weather. Latitude by indifferent observation 45° 1′ N. Engines full speed.

SATURDAY, SEPTEMBER 17, A. M.—Begins fresh breeze and cloudy. 4 a. m., passed a fisherman at anchor. Wind west. Noon, fine. Whole distance run from yesterday noon, 107 miles. Latitude observation 43° 48′. Crew employed shifting coal from hold to bunkers. 4 p. m., passed an American fisherman bound east. 6 p. m., fresh breeze from west. Smooth water, altered course to west. Midnight, do. weather. Engines full speed.

SUNDAY, SEPTEMBER 18, A. M.—Begins strong breeze from the westward and fine weather. 8 a. m., do. weather. No duty, being the Sabbath. Noon, strong breeze and fine. Latitude obs. 42° 53′ North longitude by chronometer. 4 p.m., 62° 33′ West. 8 p. m., do. weather, making four knots per hour. Wind increasing a little. Midnight, heavy head sea making three knots per hour. Engines going full speed.

MONDAY, SEPTEMBER 19, A. M.—Begins as yesterday. 6 a. m., strong breeze, ship not making much way. Set fore and aft canvas making W. by N. course. 8 a. m., do. weather and very fine. 10 a. m., Allen line steamer passed East, Bargen in sight, reaching south. Noon, fresh breeze from W. S. W. and fine. Lat. obs. 42° 29′ N. Whole distance by patent log, 101 miles. p. m., crew employed shifting coal from hold to bunkers. 5 p. m., moderating and cloudy. Stowed fore and aft canvas, gave course W. by S. ½ S. 8 p. m., few flashes of lightning to the westward. 11 p. m., wind veering to N. E. Midnight, fresh breeze from N. E. with showers of rain and heavy lightning.

TUESDAY, SEPTEMBER 20, A. M.—Begins increasing breeze from N. E. with heavy rain showers and heavy flashes of lightning. Set main topmast and middle staysails. 4 a. m., set spanker and fore topmast staysails. 6 a.m., weather clearing off. Wind N. N. E. Set lower topsail. 9 a. m., moderating and fine. Set foresail, upper topsail and main-top-gallant-staysail. Noon, steady breeze and clear sky. Set fore-topsail and gaff-topsail. Whole distance per patent log, 156 miles. Lat. obs. 41° 19′ N. 4 p. m., moderating. Midnight, moderate and fine. Engines going full speed. Saw a New York pilot boat.

WEDNESDAY, SEPTEMBER 21, A. M.—Begins steady breeze from N. E., and clear sky. 2 p. m., saw two steamers bound east. 8 a. m., moderate, veering around to the S. E. 8 a. m., stopped the engines to renew

"HOME AGAIN"—THE "KITE" AT THE WHARF IN PHILADELPHIA.

circulating pump valve. Delayed one hour and started again. Noon, strong light breeze from N. E., and fine. Latitude obs., 39° 49′ N. Whole distance run for the twenty-four hours, 184 miles. P. M., fine, crew employed shifting coal to bunkers. Midnight, light breeze from S. E., all possible sail set. Sounded ninety-one fathoms.

THURSDAY, SEPTEMBER 22, A. M.—Begins light breeze from the S. E., and fine. 2 a. m., cloudy. 4 a. m., sounded forty-three fathoms. 6 a. m., light rain showers. 8 a. m., sounded thirty-one fathoms, grey sand and shells. Altered course to W. by S. Noon, cloudy. Whole distance run, 180 miles. 1.10 p. m., took on board Philadelphia pilot, and steered for the Delaware. 3 p. m., passed close by Five Fathom Shoal light vessel.

[END OF LOG.]

THE PEARY RELIEF EXPEDITION.

(For the narrative of the "Relief of Peary" we are indebted to Wm. E. Meehan, Esq., Associate Editor of the Philadelphia "Public Ledger," who was the botanist of the relief expedition.)

CHAPTER I.

THE RELIEF EXPEDITION.—ITS CONCEPTION.—GOODS FOR FREE DISTRIBUTION AMONG THE NORTHERN ESKIMOS.—SKETCHES OF THE MEMBERS OF THE EXPEDITION.

THE West Greenland Expedition had scarcely returned from McCormick Bay when many people began expressing fears for the safety of the Peary party. These fears were partly the result of a general belief, grounded on the various books of Arctic travel, that lengthy residence in North Greenland was necessarily attended by frightful hardships, and partly the effect of numerous newspaper articles which took a pessimistic view of the situation. It was argued by the writers of these articles that Lieut. and Mrs. Peary and their companions had not been supplied with sufficient provisions and fuel to carry them through the rigors of an Arctic winter; that the accident by which Lieut. Peary broke his leg in Melville Bay, on his way north, would not only interfere with his proposed journey in the spring over the inland ice, but actually jeopardize

the lives of the whole party, and lastly, that if the members of the expedition did pass through the winter without freezing or starving to death, it would be impossible for them to make a safe retreat in open boats from McCormick Bay to Upernavik, a distance of more than 600 miles.

Those who were best acquainted with the Arctic regions and with Lieut. Peary and with the careful consideration he had given the matter of provisions and fuel had no concern as to his or his companions safety during the long winter night in Greenland. But the fears that the party could not successfully make its way southwardly through the dangerous ice-packed Melville Bay in open whale boats seemed well founded to almost everyone. Morever, the proposed journey seemed to many to have added precariousness when it was pointed out that the members of Lieut. Peary's party were not accustomed to the kind of craft they would be obliged to use, and that as a consequence, however hardy they might be in other respects, they would not be able to stand the strain demanded of them. Among those who held these views concerning the boat journey were many members of the Academy of Natural Sciences, and they finally discussed the advisability of sending an expedition to the relief of the explorers, and in the end formally made such a proposition at one of the winter meetings. There were a few slight objections raised by some at the outset, but these were over-ruled, and in March, 1892, the Academy of Natural Sciences decided

that a relief party should be sent out under its auspices, with the proviso, however, that the funds required should be raised by subscription. Professor Angelo Heilprin, who had made an efficient head of the West Greenland Expedition in 1891, was appointed leader of the one now decided upon. It received the title of the Peary Relief Expedition, and the scientific body fostering it appointed a committee consisting of Professor Angelo Heilprin, chairman ; Gavin B. Hart, Uselma C. Smith, Dr. Benjamin Sharp, and Dr. Dixon to assist in raising the funds and in making the necessary arrangements for the voyage.

Although $10,000 was the sum named as needed, that amount was practically raised by June 1, and the *Kite*, the staunch little vessel which had taken the North Greenland and the West Greenland expeditions the previous year, was chartered in St. Johns, and genial Captain Richard Pike, of Harbor Grace, Newfoundland, who had proved his skill in Arctic navigation on the first voyage of the *Kite*, was again secured as its master.

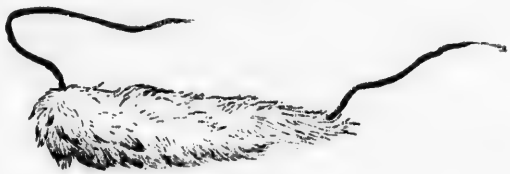
In the meantime Dr. Joseph T. Rothrock, of West Chester, who is prominently known in Philadelphia as a lecturer on botanical topics, conceived the happy and philanthropic idea of sending a quantity of wood for sledges, kajaks and harpoons ; of iron spear heads and household utensils, to be distributed as gifts among the Eskimos, whose settlements are on the west coast of Greenland, at Cape York and above. As trees are unknown so far north, and as the people have no

facilities for smelting what little iron the country yields, these articles would be invaluable to them in their struggle for existence; besides, their good-will and friendly disposition might be of incalculable service to the relief party in furthering the object of their setting out. It is, therefore, little wonder that Dr. Rothrock's benevolent scheme met with immediate and cordial sup-

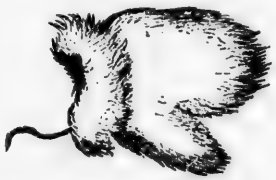
WATCHING FOR SEAL.

port. From well-known residents of his home, in West Chester, came generous contributions. In Philadelphia, Professor Edwin J. Houston, head of the Department of Physical Geography and Natural Philosophy at the Central High School, was perhaps the most interested in this proposed good work, and through him a large

quantity of articles and considerable money was contributed. Professor Heilprin, on the part of the members of the relief expedition, cheerfully promised to faithfully carry out the wishes of the donors. Into his charge were given six Arctic sleds, twenty-five spears made from files donated by Hoopes, Brother & Darlington, 100 hickory spear handles, forty-eight spools of copper wire, 120 butcher knives, thirty-two pounds of hoop iron, 108 thimbles, 1000 assorted needles, a great number of files of various sizes and patterns, about two



dozen iron kettles, a dozen cleavers, two dozen saws, many scissors, thimbles, hammers, braces and bits, planes, and a large quantity of cut lumber.



The Academy of Natural Sciences, besides entrusting the leadership of the expedition to Professor Heilprin, gave another proof of its confidence in him by leaving to his judgment the selection of those who were to

accompany him, and he chose the following as his companions :

Henry G. Bryant, second in command. Although a young man, he has a good record as a traveler, having journeyed over Northern Africa and almost every country in Europe, and pretty much the whole of the United States. His greatest achievement, however, was in 1891, when he led a small party to the Great Falls of Labrador, 350 miles into the interior of that almost unknown country, and was the first to ascertain their height, 316 feet. Previous to his visit, but two white men had ever seen this great body of water.

William E. Meehan is an associate editor of the Philadelphia *Public Ledger*, and was its staff correspondent on the voyage. He is a son of Professor Thomas Meehan, of Germantown, vice-president of the academy and a scientist of note. To him was entrusted the botanical work of the expedition.

F. W. Stokes, the third member of the party, is an artist. He was engaged by the publishers of *Scribners' Magazine* to make sketches for them during the voyage, and all the time that could be spared from his duties as a member of the expedition were to be devoted to that purpose.

Albert White Vorse is the exchange editor of the Philadelphia *Press*.

Samuel J. Entrikin, the photographer of the party, is a native of this State. Until a year ago he was

Superintendent of Industries in the Schofield Normal and Industrial School at Aiken, South Carolina.

Dr. Jackson M. Mills, the surgeon and physician of the party, is a native of Detroit, Mich., but for the past four years he has resided in New York.

Charles Edward Hite, the taxidermist of the expedition, was for some time assistant to Professor Dyche in the State University of Kansas.

CHAPTER II.

THE START.—THE MIRANDA.—FROM BROOKLYN TO HALIFAX — IN A DENSE FOG.

ALL arrangements for the voyage having been completed, the members of the Peary Relief Expedition assembled in Brooklyn on Monday, June 27, and took passage on the steamship *Miranda*, which plies between that port and St. Johns, Newfoundland, where the *Kite* was in waiting. The vessel was advertised to leave at four o'clock in the afternoon, and the announcement that the members of the relief expedition were to be passengers, attracted a large number of people to Robinson's wharves where she was lying. Among them were friends and relatives of the departing voyagers and of several of the members of Lieut. Peary's party. When the hour set for departure came, Mr. Stokes was not on hand, although his baggage, with which he had previously had trouble, was safely on board. The steward of the *Miranda* was likewise conspicuous by his absence. For these a wait was deemed desirable, although the captain walked up and down the deck fretting and fuming at the delay. He, nevertheless, managed to restrain himself within reasonable bounds for an hour, when, on the belated ones not appearing, he declared he could wait no longer and gave

orders to cast off. This had scarcely been done, and the *Miranda* begun to move, when Mr. Stokes appeared red and excited on the wharf flourishing a bundle in one hand, and shouting loudly to be taken on board. Two of the members ran forward, and as the *Miranda* moved slowly out of the dock, seized him by the arms and dragged him, in not the most dignified manner, over the side.

Amid the cheers of the large gathering of friends on the wharf, and the blowing of steam whistles from the many ships in the harbor, the *Miranda* turned slowly northward and carried away the party. All the members were cheerful and discussed brightly the prospect of finding Lieut. Peary and Mrs. Peary and their companions, and of bringing them back safely, and devoured at the same time the contents of a magnificent basket of fruit, which had been sent them by Mrs. Cook, the mother of Dr. F. A. Cook, then in McCormick Bay.

After leaving the wharf in Brooklyn the *Miranda* steamed up the East River, through Hell Gate and into Long Island Sound, and by morning was pitching and tossing in the open Atlantic. Those who were unaffected by this motion thoroughly enjoyed themselves, notwithstanding the fog, which obscured all distant vision. A large flock of Mother Carey's chickens followed in the vessel's wake, diving, flying and swimming, eagerly snapping up any bit of food which might be thrown overboard. Besides these the waters about the vessel seemed to be alive with jelly fish, and Mr. Hite, the

taxidermist, was fortunate enough to notice a specimen of the rare "Portuguese Man of War," so-called from its red caplike head. Some pretty sea-weed also floated past now and then, on which the Mother Carey's chickens pounced with avidity, doubtless for the animalculæ which dwell abundantly therein.

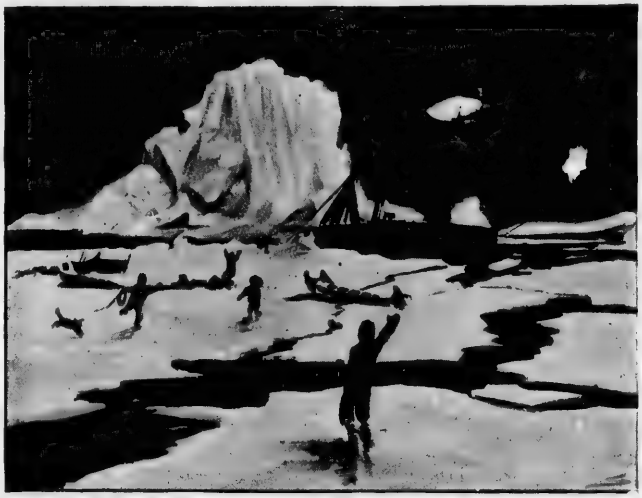
The passengers aboard were a jolly set, and, even those who became seasick, were as cheerful as the famous Mark Tapley, and, between the periods of their own devotions to the old god of the sea, good naturedly jeered those who were engaged in the same worship.

When it was generally known on board that Captain Pike was to be the commander of the *Kite*, loud were the praises sung in behalf of this great-hearted man by a number of Newfoundlanders among the passengers and crew who seemed to know him well.

Among those who joined most heartily in the praises of Captain Pike was a member of the crew, named William Saunders, a magnificent specimen of Newfoundland manhood. He was one of the crew which took Lieutenant Greely to Fort Conger on his ill-fated expedition and left him there. He also was one of the crew of the *Proteus*, under command of Captain Pike, which was wrecked in Smith Sound in 1883 by being crushed in the ice, and was in charge of one of the three boats which successfully made the famous escape through the dangerous and dreaded Melville Bay. Saunders did not appear to consider the feat a remarkable one, and when one of the party remarked in a sympathetic tone that he guessed he must have had a hard time of it, replied in a matter of fact way, "Oh, no, we had good open boats, plenty of warm clothes and lots of food; what more did we need?" On being asked what he called a hard time, he replied, with emphasis, "Being lost on a cake of ice, with wet clothes, in freezing weather and with nothing to eat, and I've had that many a time."

This man is the second person the voyagers met with since leaving Philadelphia who has been a prominent actor in notable Arctic expeditions. Just before the *Miranda* sailed from Brooklyn, a weather-beaten tar approached Professor Heilprin and begged to be taken along as one of the officers of the *Kite* on our present enterprise. He based his claim for the position on the statement that he was one of the crew of the famous Polaris expedition, and he appeared much disappointed

when he was informed that his request could not be granted. He was afterward recognized by the chief officer of the *Miranda* as the boatswain of the *Polaris*, and who, when in the autumn of 1872 the vessel seemed in imminent danger of being crushed in the floes in Smith's Sound, with a number of others took refuge on the ice near by and camped there. Before the



THE SEPARATION OF THE FLOES—"POLARIS" EXPEDITION, 1872.

next day the floe on which they were, separated from the vessel and floated away, taking with them the unfortunate men and an Eskimo woman. For eight months they drifted about, and were finally picked up on the American side of Baffin's Bay, after enduring untold hardships.

With the exception of a few brief intervals the fog continued throughout the voyage, necessitating

frequent soundings. This proceeding, together with the condition of the atmosphere, caused a report to spread through the vessel that the captain did not know where he was. This report, it is to be regretted, was strengthened by the captain himself, who answered all queries as to his position by mysterious grunts and growls.

While the passengers were discussing this matter somebody raised the cry of sharks, and a rush was made for the side of the vessel. There they were, two ugly brutes, one apparently about six feet long and the other seemingly much larger. When first observed they were ahead, but soon dropped astern, where they followed for nearly half an hour, sometimes showing themselves and sometimes burying themselves beneath the waters.

Soon another bit of excitement was afforded the passengers. The fog, which momentarily grew heavier, at last became so dense that nothing could be seen more than a boat's length ahead. Then the whistle of a steamship was heard in closer proximity than was pleasant, and a few minutes later another vessel on the ship's quarter set up an unearthly tooting, and then a third whistle not far away. In the midst of the uncomfortable feeling which was seizing the party, however, a pilot boat loomed out of the mist and a moment later the fog lifted as by magic, and the vessel was seen to be close to land, which rose in alternate precipitous white cliffs and low verdure-covered hills, just off Halifax, and two hours later, on the morning of June 30, the *Miranda* steamed into the harbor and brought up at the wharf.

CHAPTER III.

HALIFAX.—ITS HOUSES, STREETS, AND DOCKS.—A LATE SPRING.—ARCTIC EXPLORERS.—WILLIAM SAUNDERS UNDER FIRE.

WHEN the *Miranda* was made fast to the wharf at Halifax, it was understood that she was to remain there not more than six hours, and therefore if the passengers desired to see much of the town they must make the most of that time. Scarcely one among them needed a second hint, for all hands hurried down over the gangway to solid land, and in a few minutes were scattered over the town. Professor Heilprin, Mr. Bryant and Mr. Meehan, of the relief party, and one of the passengers cast their lots together, and made their exploration as thorough as possible.

Halifax is the capital of Nova Scotia, and the chief naval station of the British Empire in the Western Hemisphere. It has about 40,000 inhabitants, and one of its chief prides is its water supply, which is drawn from the Chain Lakes about twelve miles distant, and at such a height above the city that water is forced by its own pressure to the tops of the highest houses. The town is beautifully situated, lying as it does at the base of the low green hills that bound the picturesque bay.

In scarcely a feature does Halifax resemble a city in the United States. In its architecture, its streets, its general sleepiness, and the red-coated soldiers who overrun it, Halifax stands apart from the cities of the American Republic. As in most of the Dominion cities, the tendency has been to the erection of frame dwellings, with shingled walls in lieu of weather boarding, and these are built mainly in the American colonial style. Indeed, many of them look as though they had been constructed during the early days of Nova Scotia.

Here the era of improved pavements had not yet arrived. Macadam is the only pavement used even in the heart of the business quarters, and this material forms the sidewalks for pedestrians as well as the wagon ways. It must be confessed, though, that the work of laying of this kind of pavement has been well done, although the rules laid down by Mr. Macadam for its construction are followed in scarcely a single particular. In one piece of work which was seen in process of construction, the thoroughfare was excavated to a depth of at least four feet and filled in with stones of various sizes and covered with crushed rock. This, rolled and re-rolled, made a hard and good road, which did not appear to wear badly. Even those which were put down on streets which led up the steep hillsides appeared to hold their own fairly well. The complaint, however, was frequently heard of their muddy and dusty character, according to the weather, just as we hear made against Macadam in our own American cities.

Besides the magnificent water supply, the people of Halifax are blessed in their public parks. There are two of these, each entirely different in their features, and both charming. One of them is almost in the heart of the town, and is called the Public Gardens. It is a tract covering some eighteen acres, and is almost wholly artificial in its construction, and so skillfully and artistically has the task been performed that it is a pity that the municipal authorities do not remove the unsightly wooden fence which surrounds it, and is the only object which mars its beauty.

Eighteen years ago, when the municipal authorities purchased the ground as a public breathing place, the site was partly an old truck garden and partly a big bog hole, through which a small stream ran diagonally. Fortunately, the city was judicious in the selection of a superintendent. Mr. Richard Power, the gentleman in question, is not only an enthusiast in landscape gardening, but he has the rare faculty of being able to carry out his artistic ideas in a practical manner. As a result, the old truck garden and the bog hole have been transformed into a floral and arboral paradise. A pretty lake occupies a portion of the grounds, and the little stream has been transformed into a picturesque brook, with charming cascades and delightful pools. Mr. Power has also established here an arboretum of which even a larger city might well be proud.

The other park owned by Halifax is remarkable, not only for its inherent loveliness, but as illustrating the

good sense of those who have the property in charge. About five years ago this tract, which comprises over 500 acres, and is situated on Point Pleasant, a high bluff which projects tongue-like into the ocean and forms one side of Halifax Bay, was a wild woodland, composed chiefly of spruces and pines. Through this wilderness of trees the municipal and military authorities have jointly made handsome serpentine drives in every direction, each, however, leading to some promontory from which grand views of the sea are offered.

On one of these promontories is situated an old military tower, circular in form, and from thirty to forty feet high. This tower, which is called the Prince of Wales Tower, is said to be the oldest of its kind in the country, and from its summit, as might be readily imagined, splendid views are obtainable. Near here Scotch heather grows abundantly, and if the story be true, from this point all American plants of this pretty species originally came. It is related that a little more than a century ago a Scotch emigrant vessel was wrecked on Point Pleasant, and the beds of the emigrants washed ashore. These beds were stuffed with the heather of the Scotch hills, and some of the seeds germinated readily upon a soil so like its native country, and flourished. This story may not be true, but doubtless has as much foundation as many tales that are related of places and things.

In this park were found some of the most wonderful evidences of glacial action which Professor Heilprin

said he had ever seen outside of the Arctic regions. Although belonging to the same period as that which prevailed over the greater part of America, the marks are still deep and plainly visible.

High above the town is the citadel. From the summit of Citadel Hill one of the grandest of views of Halifax and its surroundings may be obtained. From it one looks down on the terraced town, across the sparkling bay to the white rocked hills, crowned with the black and green of the black spruce and the pines. In the midst of the bay rises George Island, surmounted with its frowning fortifications. To the left the bay runs into a little cove in which is H. B. M's shipyard, where the cruiser *Blake* is lying fresh from the docks. To the right, vanishing in the horizon, the blue ocean sparkles in the sunlight.

Besides the military post, Halifax is a naval station, and four of her Majesty's vessels were in the harbor, and five or six more were expected in a few days. The queen's wharves, before which the vessels lay, are connected, so it is said, with the military citadel by means of an underground passage.

At the time the Peary Relief party were there Halifax was enjoying the fullness of spring. The lilacs were in blossom, and these, together with other vernal plants long since over at home, made the air heavy with fragrance. This and the bracing air from the hills and sea rendered the place so delightful that, as the hour set down for departure approached it was with the deepest

regret that the party turned their footsteps towards the wharf, where the *Miranda* lay, and their disgust found vent in words when, on arriving there, they learned that her freight was not yet loaded and that the time of her sailing was uncertain. To make the matter worse, this uncertainty rendered it unsafe to go to any distance. In this condition they were kept until ten o'clock the next day, for, after the freight had been got on board and the bunkers filled with coal, it was found that the four firemen had deserted and others had to be engaged.

It seemed to be the fortune of the party to come across those who have met with thrilling experiences in the Arctic regions. The cases of the boatswain of the *Polaris* and of the sailor on the ill-fated *Proteus* have already been noted. While in Halifax they met a third person who had been prominent in Arctic adventure. This was Captain Ash, commander of the *Portia*, the twin ship to the *Miranda*. He was ice pilot on board the *Bear* in the successful search for Lieutenant Greely, and it was Captain Ash who first discovered the little skin tent in which the party lived and starved, and it was he who cut his way into the tent and gave them relief. Captain Ash is a good example of the Newfoundland sailor, strong, well knit and good natured—a man in whom one instinctively places implicit confidence.

At length, on Saturday morning, July 2, just as the British flags were being floated from every staff in Halifax

in honor of Dominion Day, everything being ready, the *Miranda* cast loose from the wharf to which she had been made fast, and steamed slowly out of the harbor and turned her prow toward St. Johns.

Mention has already been made of William Saunders, the rough-and-ready mariner who took in such an unconcerned manner his marvelous escape in an open whale boat through Melville Bay after the wreck of the *Proteus.* After the *Miranda* left Halifax, some of the party trained their Eastmans on the unconscious William, who was then acting as lookout, in order to get a picture of him. In this they were aided and abetted by a Mr. Fletcher, a Newfoundland gentleman, with whom the members struck up a warm friendship. After they were all through and had gone away, Saunders turned to Mr. Fletcher and with some uneasiness in his voice, said, "Mr. Fletcher, what were you and the gentlemen doing? Ye kep' sayin' 'Willum, look here' and 'Willum, look there,' and then every time I heard a little snap like." "Indeed, William," replied Mr. Fletcher, "I can't exactly say. It was some sort of a scientific experiment they were trying on you. I think they call it a snap shot. It don't hurt you none, and a picture comes from it." "A picture did you say they were takin'?" exclaimed the innocent Saunders. "Why didn't they say so an' I would have fixed up a bit." Then he fell to discussing the party, and expressed his doubts as to whether they were the proper sort to go to the North pole. "Why," said

he, "most of 'em were seasick and ain't sailors." "No," said Mr. Fletcher, "but they are scientific men and newspaper men, and they are a hardy lot and know how to get there." "Yes," said Mr. Saunders, not yet convinced, "they may *know how*, but me an' you, Mr. Fletcher, *would* get there, 'cause we're sailors."

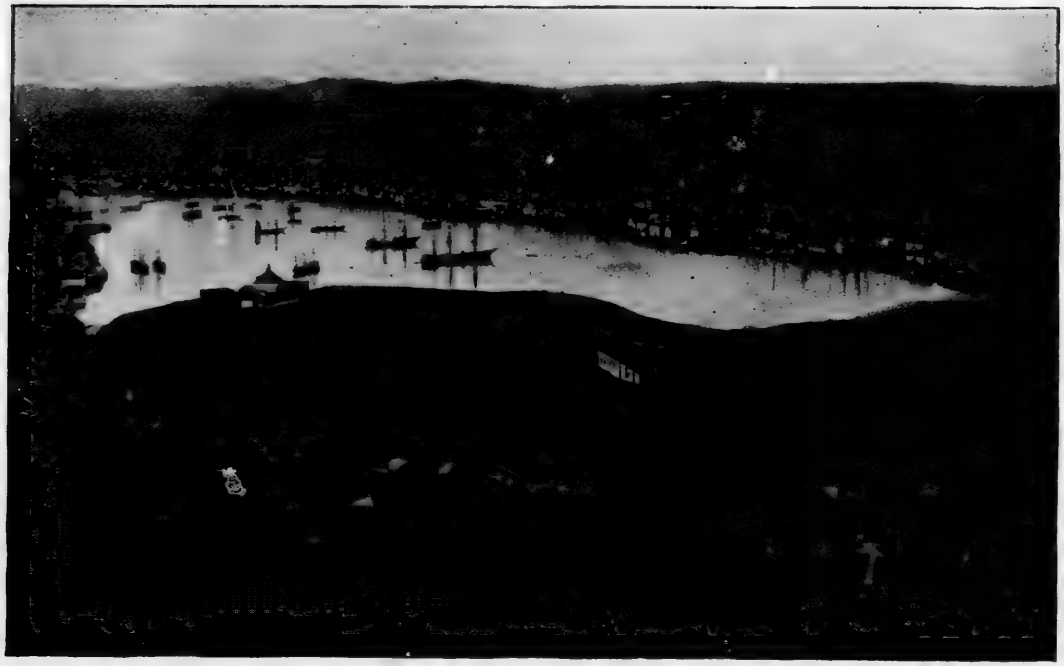
CHAPTER IV.*

FIRST ICEBERGS.—ST. JOHNS BEFORE THE FIRE.—THE "KITE'S" OFFICERS AND CREW.

IT was Sunday, July 3, exactly at noon, that the Peary relief party again came in sight of land, a long stretch of low hills, covered by a thin haze, known as Fairyland Head, about forty miles from St. Johns. This spot of ground has a somewhat romantic history. Here Lord Baltimore came, and was so charmed with the place that he established a Roman Catholic colony, which he called Fernlaw, in honor of his country seat in England. This colony, however, failed, and Lord Baltimore sailed to Maryland where Baltimore now is. The ruins of this old colony in Newfoundland are still to be seen, and though there is a village there now, it is a small one, composed chiefly of fishermen. Its present romantic name, "Fairyland," was given to the place because it was believed to have been a favorite haunt of elfin sprites, hobgoblins and other weird folk from the land of mist and dreams.

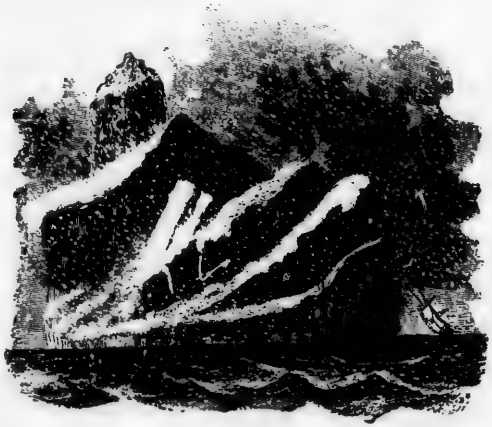
Almost simultaneously with the sighting of this land the voyagers had their first view of an iceberg, but it

* The city of St. Johns was almost completely destroyed by fire five days after the visit of the party.



ST. JOHNS BEFORE THE FIRE.

was such a wretched, insignificant specimen that it failed to evoke any enthusiasm whatever. Two or three more of a similar character were then seen successively and evoked but little comment, but shortly after dinner one was observed which drew every one to the ship's side and caused much discussion as to its size. It was a pyramidal-shaped block, dazzling white in its setting of blue water and sky, and reared its head over 150 feet in the air.



As the vessel approached nearer the shore, and came within sight of Cape Spear, the vast spruce woods which cover the hills were seen to be on fire, and great clouds of smoke rose skyward and floated heavily out to sea. This smoke soon became so dense that it entirely obscured any sight of land until the cape was doubled, when suddenly the verdure-covered red rock bluffs reappeared to view, presenting a panorama of wondrous

beauty. The voyagers found themselves in a great semi-circular basin, bounded by broken and precipitous cliffs of red sandstone, which rise sheer out of the water more than 400 feet high, and against the base of which the waves dash themselves into foam. Here and there great caves show in the face of the cliffs, formed by the action of the waters, and from their depths comes the hollow roar of the sea as it toils and eats further and further into the soft, crumbling rock.

Across this basin, which is called Freshwater Bay, the *Miranda* steamed towards a depression in the hills, which, when it was approached closely, was found to be a narrow passageway of water only a few hundred feet wide. Through this the *Miranda* steamed, and entered a small circular bay, at the other side of which nestle St. Johns at the water's edge, and soon she was made fast to one of the wharves.

Looking upon the picturesque little town and harbor one might well feel with and join the native poetess in the heartiness of her toast:

> 'No stately monuments adorn thy coast;
> No ancient abbey canst thou boast;
> Yet I will pledge with heart and hand
> Thy health forever, Newfoundland."

As Halifax differs from all cities in the United States, so does St. Johns differ from Halifax, but as Halifax possesses features distinctively its own, so St. Johns occupies a pinnacle equally unique. In three particulars only do these two cities resemble each other. Each

paves its streets with Macadam, each has a sleepy, foreign air, and each uses chiefly timber for building purposes and scarcely any brick or stone. But the streets of Halifax run, to a great extent, at right angles with each other, while in St. Johns they either wind and curve into one another in the most bewildering fashion, following the contours of the picturesque hills on which the town nestles, or make a bold run straight up the steep incline towards the summit of the ridge.

The Macadam paving of the main portion of these thoroughfares is not nearly as carefully done as in Halifax. The turnpikes, however, in the environs of St. Johns are excellent. As one wanders along them one is struck with the similarity of the character of the roadsides to those of the Isle of Wight. Hedges of hawthorn line both sides of the roads, and the soft green grass-covered hills are singularly like those of that pretty isle, the pride of England.

About 30,000 people reside in St. Johns, and like those of Halifax, they seem to have a leaning towards ancient looking buildings, but, unlike those in Halifax, who affect gambrel roofs, those of St. Johns prefer the plain double pitch, so steep that nearly all have to be provided with fixed ladders in case of fire. In the matter of water supply the residents of this place are exceptionally fortunate, and claim that they have the purest and best water in the world. The source is Twenty-mile Pond, a large lake, eight miles out of town, on a hill more than 1600 feet above the sea. Down the steep

incline the water rushes, aerating itself by its own velocity, and runs in clear cold streams by its own pressure to the tops of the tallest buildings.

Although a small place, St. Johns does a commercial business of some importance, shipping largely fish, sealskins and minerals to the States, England and the West Indies. But the people move at an easy pace. They do not seem to be able to comprehend the meaning of the word hurry. In their parlance to-morrow is synonymous with to-day, and two or three hours more or less a matter of no consequence.

Picturesque as are the approaches to St. Johns from the sea, they are rivalled by the views from the hills above the town, either looking westward or towards the ocean through the narrows which connect it with the bay. At the foot of the hill runs a wide and brawling stream of water, ice cold and clear as crystal, which a little distance further on expands into a broad, deep and lovely lake, three-quarters of a mile long, to which the Indian name of Quidi Vidi still clings. It rests in a grand natural amphitheatre, and here annually the people of St. Johns hold a fête day. On this occasion, the annual regatta is held and the hills are dotted with

white tents, and resound with the shouts and laughter of the gaily dressed merrymakers.

After leaving the lake, the stream which forms it, seemingly tired of the quiet which it found there, begins a mad course of nearly a mile down an incline of more than 200 feet, plunging in small cascades, swirling about huge red boulders, and dashing into foam over broad riffles, and finally emptying into the sea through a deep, narrow gorge, which it has made for itself by ages of work, and to which has been given the inelegant but expressive name of Quidi Vidi Gut.

Walking about the outskirts of the town on a pleasant July evening, when the air is full of the fragrance of flowers, young tree leaves and grass and the fresh scent of the sea, it was hard to imagine that St. Johns could ever be other than a delightful place to live in, and not until one looked closely, and observed that every tree, every shrub in exposed places leaned heavily towards the southeast, did a suspicion dawn on one what must be the severity of the northwest winds during the long cold winters. Still Newfoundlanders love their country with a love that almost passes belief, and the wild scenery, the fierce storms which sweep over it in winter, alternating with the mild, fragrant spring and the pleasant summer, fits exactly the character of the brave, strong, honest race of men who live there.

It had been intended that the *Kite* should sail on her voyage to Arctic waters on July 4, but it was found impossible to stir up the sluggish men about the wharf

sufficiently to get away before the afternoon of the fifth. Much against their wills, therefore, the members of the Peary Relief Expedition were compelled to celebrate Independence Day on shore.

The *Kite* had been greatly beautified and had only come off dock the week before ; she had been painted and gilded throughout and a new carpet laid on the floor of her cozy little saloon and the staterooms and berths were newly fitted up. All this pleased everyone except two or three grizzled old whalers, who shook their heads sadly and with disapproval at the gilding and gewgaws wherewith the staunch and steady old *Kite* had been adorned. One said that she looked more like a "painted Jezabeel than the good, honest old woman she was."

Besides Captain Pike the members of the ship's company were Captain E. Murphy, first officer; P. Dumphy, second officer ; A. McKinley, chief engineer ; John Penston, second engineer ; L. Hackett, chief steward ; Bernard Wall, second steward ; A. Lindsay, cook ; J. Cunningham, A. Roost and E. Crook, firemen, and Thomas Hayes, John Keasy, R. Flemming and Daniel McDonnell, seamen. Of these officers and crew all were new men except Mr. Dumphy, the second mate ; Mr. McKinley, who occupied the post of Mr. Jardine, the first engineer, last year ; and Andrew Roost and Edward Crook, firemen.

CHAPTER V.

LEAVING ST. JOHNS.—THE NEWFOUNDLAND COAST.—SOLOMON GOSS.—THE ARCTIC CIRCLE.—ARRIVAL AT GODHAVN.

THE *Kite*, after leaving the harbor of St. Johns, on its way to McCormick Bay, on July 5, kept near the coast, giving ample opportunity for observing its wild beauty. Clean cut, the red cliffs rose from the deep blue water to heights ranging from 100 to 400 feet, their summits, which are clothed with low vegetation, sharply silhouetted against the cloudless sky. Here a bluff rose abruptly from the sea, its aged face deeply seamed and wrinkled into uncounted clefts and ledges. Sometimes the bluffs would extend for a quarter or half a mile in a straight line along the coast, then making great sweeps backward or forward they would form small fiords. Again, instead of standing out bold and rugged, they would retreat, sometimes gently, sometimes abruptly, disclosing rolling valleys, through the centre of which broiling streams tumbled seaward over rocks and boulders. Here and there, in little nooks sheltered from the northwest winds, nestled the picturesque but rude huts of the Newfoundland fishermen.

As at St. Johns, so along the coast the cliffs are pierced by caverns carved out by the indefatigable sea, and the same irresistible element has cut through the

rocks in countless places deep gulches which are sometimes a thousand feet or more wide, but oftener so narrow that a man could readily spring across.

These clefts vary in depth from a hundred to three or four hundred feet, and in them the water lashes itself into a white foam and emits a hollow, indescribable sound, which on stormy days may be heard a long distance. Sometimes, instead of running inland, they run parallel with the shore, and then an island is formed. One of these, known as Baccalieu Island, lies between Conception and Trinity Bays. This spot was the scene nine years ago of one of the most mysterious sea tragedies known on the Newfoundland coast. Here it was that the *Lion*, carrying several passengers, parted one sunny afternoon from a companion ship and started to go between the island and the main land (the water being reputed and charted as very deep) and was never heard of afterward, and no traces of her found except the body of a woman on the shore of the mainland and the wreckage of a boat belonging to the vessel. Here it was that Cabot landed in 1497. Here, too, the fishermen have more tales of hardships and sufferings to tell of than anywhere else on the coast of Newfoundland. Thousands of lives have been sacrificed here in the hunt for cod and seal, and probably thousands more will pass to the "great majority" in the same pursuit.

It was at this point, also, that the travelers saw the first of those glorious sunsets of which Newfoundlanders

so proudly boast. The lower end of the island hid the retiring luminary, but the narrow stretch of water which separates the mainland from the island was bathed in a radiance which made it a sea of glittering gold, while the face of the red cliffs of the mainland and of the island were changed to a deep purple; the verdure above them had assumed a pale green hue with here and there patches of black. The rocks of the island in the foreground, which were in the shadow, were shaded from red to dark brown and from dark brown to black, while their edges appeared clear cut against the sky, now all aflame. Above the island the heavens were cloudless, save for a few small flecks of cirrus, now altered from silvery white to shining gold, floating in a sky whose azure blue was washed and tinted with soft yellows and delicate greens. Higher up there were great masses of ragged cumulus, purple and violet, all edged and flecked with crimson, so bright that the color was reflected by the sea. Far off to the horizon on either hand these colors extended until dissolved in the blue haze over the water. The splendor of the spectacle kept all on deck unmindful of the supper bell, which, from time to time, angrily called them to come below.

As the *Kite* is not a fast boat, its average speed being not more than seven knots an hour, the *Miranda*, which carried the party from New York to St. Johns, caught up to and passed them about nine o'clock the same night, and fireworks and steam whistle compliments were exchanged between the two vessels until they were

out of sight and beyond hearing of each other; this was the last vessel met till Disko was reached.

For the first three days of the journey from St. Johns the days and evenings were quite warm, but on the fourth the temperature began to fall until it reached close to the freezing point, and shortly after was seen the "ice blink," a white streak on the sky above the horizon, which indicates the presence of pack ice. But the sight caused no apprehensions, for Captain Pike announced that it was entirely out of the ship's course.

Soon after coming on board the *Kite* the members of the expedition learned of the existence of a mysterious personage known as "Solomon Goss." Just who he is they were unable to find out except that he was a Newfoundlander and that he had three birthdays a week, Tuesdays, Thursdays and Sundays, on which days "plum duff" was served as dessert in his honor. Plum duff is a peculiar kind of pudding, well and favorably known to sailors, and is made out of flour, raisins and suet. Most of the members of the relief expedition took to "plum duff," but there were others of them who would rather "Solomon Goss" had not been favored with more birthdays annually than the rest of mankind.

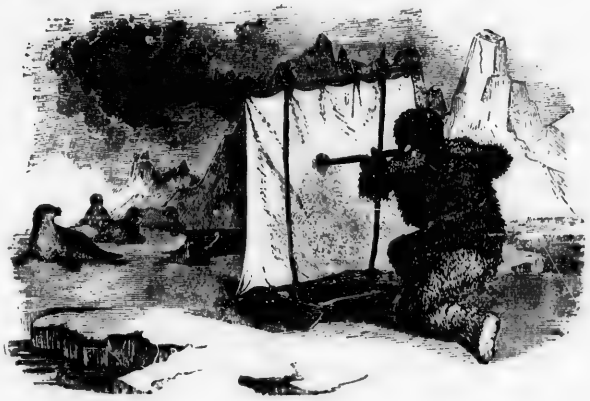
On Sunday, July 10, the *Kite* entered the outer limits of the "Land of the Midnight Sun;"—that curious Arctic phenomenon was invisible, however, owing to the fog which had prevailed for two days, a condition of the weather which also prevented them from getting

A GROUP OF SEALS.

their first glimpse of Greenland until two days later, and furthermore caused Captain Pike to run into a large field of ice on the evening of the same day. The party were at supper at the time, and the first intimation that anything was wrong was their hearing one of the mates bawl, "Hard a starboard!" at the top of his voice. Running on deck they saw ice about them on every hand in great floes, which ground against each other with a hard, rasping sound anything but pleasant. One huge mass, the domes of which reached high above the bulwarks as it floated by the vessel, struck and knocked away the large iron shute used to dump ashes into the sea. Half an hour brought the *Kite* through these large cakes, which Captain Pike said, were from the eastern shore of Greenland, carried down by the current to Cape Farewell, and thence north along the west coast towards Melville Bay.

After passing these masses the vessel had clear water for a while, and then came upon a great number of small fragments which proved the precursors of another larger and more difficult pack to pass through, and which in fact she did not get out of for two or three days, and then only after many retreats, buttings and searching for leads, during which manœuvres Mr. Dumphy and Mr. Murphy were kept busy in the crow's-nest, a large barrel at the foremast, shouting: "Steady," "Starboard," "Steady," "Port," and now and then the exasperating order to "Burn her down," that is stop the engines and lay to.

During one of these periods of "laying to," a number of the party clambered over the side of the vessel on to a large cake of ice and finding there a quantity of snow, betook themselves to the undignified sport of snow-balling, until the cry of "seal" put a stop to the play, and sent some of the boys in an unsuccessful stalk for the animal, which was some two miles away.



The *Kite* got out of the ice finally on Tuesday morning, July 12, and soon after, the fog lifted and those on board had their first sight of Greenland. They were a short distance above Cape Desolation, not far from the same spot where the bold navigator, John Davis, found himself long years ago. Like them, he arrived in the midst of a great fog and hearing a great roaring noise, he put forth in a boat. Returning he reported to his comrades that they were near a rugged shore on which there was no vegetation and that the rocks which composed

it were covered by nothing but ice and snow. Therefore, he named the place the Land of Desolation, and there is a singular appropriateness in the name. From this point to the island of Disko, the coast line is a succession of convulsions, jagged peaks, great crevasses, dome-like islands and glaciers.

On the same night Mr. Murphy, the first mate, called all hands on deck to witness such a succession of phenomena as kept them running from one side of the vessel to the other to see them all. There was the sun, at eleven o'clock at night, sinking below the horizon just a little west of north—a brilliant sunset in the south—a gorgeous rainbow running through the pink radiance of this to the east—a wonderful mirage in the north—the gleam of a coming sunrise a little east of north—all at the same time. Besides this, the needle of the ship's compass was pointing westward and the air, although the thermometer indicated thirty-four degrees, felt quite warm. About the vessel were huge icebergs, colored by the setting sun crimson, blue and violet, sparkling like jewels.

On the following day the Arctic circle was passed and the occasion was appropriately celebrated by songs and games, and on the evening of the next day, July 14, the *Kite* entered Godhavn. It was a beautiful day, the fairest experienced since the departure from St. Johns. There was not a cloud in the sky and the sun shone in the morning with a mild glow which tempered the otherwise cool atmosphere and made it delightfully bracing. Early in the morning the vessel steamed past a company of

icebergs on their silent march in single file towards Melville Bay. These bergs were of all sizes, and no two alike save for their whiteness and their grandeur.

Eric the Red, wild old heathen that he was, had some support for his deception, when a thousand years ago he called the country Greenland, for during the summer the great basalt cliffs are clothed in a mantle of emerald

sheen by great patches of bright green moss and grass, and the verdure of creeping willows. About five o'clock the propeller of the *Kite* ceased revolving, and, to the answering signal of the steam whistle, a boat put off from shore, bringing on board a half-breed pilot, who soon landed the members of the expedition at the settlement of Godhavn.

CHAPTER VI.

OFFICIAL RECOGNITION OF THE EXPEDITION.—AN ESKIMO INTERPRETER.—CLIMBING A GLACIER.—IN MELVILLE BAY.

KNOWING from past experience how strictly the Danish government in South Greenland endeavors to enforce the laws relating to its Arctic possessions, Professor Heilprin before leaving Philadelphia took the precaution of securing from Denmark, through the Department of State at Washington, an official recognition of the Relief Expedition. As a result, when the *Kite* arrived at Godhavn on July 14, it was found that the governor of that place had not only been apprised of the coming of the expedition, but had received instructions to extend every courtesy and do everything in his power to further its interests. It was subsequently ascertained that similar orders had been given to every inspector and governor on the entire west coast of Greenland.

At the request of Professor Heilprin, the members of his party were promptly furnished with fur clothing and with an interpreter to accompany them for the remainder of the voyage.

This interpreter, Daniel Broberg by name, was the nephew of the wealthiest Eskimo in the settlement, a

man reputed to have the snug sum of $500 laid away in the bank. Daniel was one of the five male servants of the officials of Godhavn, and the jolliest of good-natured Eskimos. He was about twenty-two years old, short of stature and stout of form, and prided himself on the fact that he "much wash."

Daniel was greatly pleased to be asked to accompany the party on their journey north, but with a wisdom highly commendable, born probably of gruesome tales related by his brethren of their treatment by some former expeditions, before agreeing to go, he insisted on several conditions. Among these were, that no one should order him to do any work except accredited members of the party; that in case of his meeting with any accident he or his relatives should receive a substantial money indemnity; that when his services as an interpreter were no longer needed he should be returned to Godhavn, and that he should receive a stated sum and his food while with the party. Although Daniel's English was extremely limited, still, as he received such a good character, which his appearance bore out, and as he appeared very bright as well as good-natured, his terms were acceded to and he was engaged.

The settlement of these and several other matters required a stay in Godhavn of some twenty-four hours, and the intervals were occupied by visits to various points of interest. One of these was a glacier on the island of Disko, which it was asserted had never but once before been ascended. The path to this river of

ice was for a portion of the way through Blauzy Dael or Windy Valley up to a deep gorge or crevasse in the earth which extends from the summit of the island to the Red River and is known as the Devil's Hole. At the bottom of this gorge an angry torrent dashed, roaring sullenly, in tumultuous cascades over the rocks. The route was rough and tiresome from the beginning and grew more so as the glacier was approached, making frequent rests necessary. At length the party came to an immense terminal moraine which formed a barrier more than forty feet high. One end of this moraine had been torn away by the action of the stream, leaving an incline composed of loose stones reaching down to the edge of the Devil's Hole. Across this incline, where a single misstep or the sliding of a single stone might prove fatal, the party were obliged to pick their way ; it was with considerable hesitation that they ventured on the treacherous spot, and all breathed freer when safe on the other side.

A short distance beyond, the glacier was reached, and the ascent of its forty feet of wall to the lateral moraine was successfully accomplished. From its source, the ice-cap, the river of ice came down to its discharging point in a huge white dome, across which were marks in many directions like great scratches upon its surface. These scratches had once been crevasses, but by some freak of ice movement had become closed. Here and there, however, were crevasses which were yet open. These when looked down into displayed hanging from

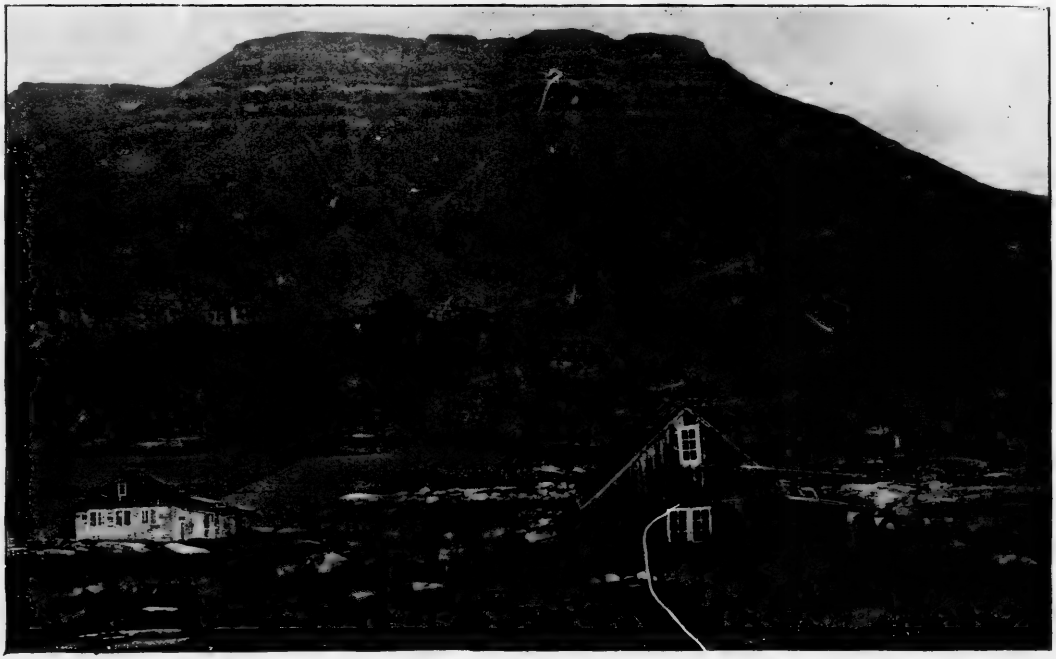
their blue sides myriads of icicles, and when any of them were knocked off they fell into the unknown depths with a clangorous sound like the ringing of bells.

As the summit of the glacier was approached it was discovered to have a tributary, a smaller stream of ice, which emptied into the main body with a force that at the junction had torn both up wildly. Above this was the cirque or névé basin into which the great ice-cap crowning the whole island pours its supply for the glacier.

From this point a fine view of the surroundings was obtained. On the left far below, nestled on the rocky shores of the picturesque little bay was seen the settlement of Godhavn; to the right lay the broad ocean, on whose surface floated countless icebergs all silently and majestically moving in procession northward to Melville Bay. Beyond, over the coast of the mainland the ice-cap of Greenland rolled to the horizon, a pure white streak against the blue sky.

On another occasion two of the party, the writer being one, explored Blauzy Dael, that lovely valley once the bed of a glacier, but now clothed with green moss, dwarf willows and birches, and dotted with Arctic wild flowers whose pretty faces smiled defiance at the desolation near them.

Following the Red River the two adventurers came finally into a spot of great loveliness. To the left the valley trended. Close to them lay a lake perhaps a mile in length formed by melting snow, so clear, that



GODHAVN.

though deep, its bottom was plainly visible, and so still, that the adjacent hills were reflected on its surface so sharply that but for the small fringe between them and the water's edge it would have been impossible to tell where the hills ended or the reflection began. These hills on the east have absolutely perpendicular sides sheer up to their flat tops, and stand in array one closely following the other like a row of huge red boxes. On the west the hills slope towards the ice-cap, and are scarred by the action of a long-gone glacier and worn by many streams which flow from the ice. Several lofty waterfalls which add to the turmoil of the Red River's run to the sea, and the many patches of ice which lay in shady spots among the red hills together with the stretches of soft green moss from which peeped the white and yellow Arctic flowers, lent the scene a singular beauty as charming as it was unexpected in these high latitudes.

The necessary work in Godhavn accomplished, the party left that place in the afternoon for Upernavik. Fond farewells were waved to Daniel by the Eskimo belles, and the former as the settlement faded from sight informed his new employers, with a good-natured grin upon his red-brown face, that he felt as though he could "much cry."

After leaving Godhavn the *Kite* was kept close to the coast, and as the weather was very fine, there were excellent opportunities for seeing and enjoying the scenery, which continued to grow more varied and

interesting as we advanced further northward. Among the most singular and striking phenomena are the sharp ridges of the mountains at the junction of the ocean and a fiord. One of the most remarkable of these is Sertok Point on Disko Island, which forms the lower abutment of Oomiak fiord. Here, the slope facing the fiord and that which fronts the ocean, though both are comparatively gentle, taper to such a point that the crest of the mass, more than 2000 feet high, is so sharp, that no place in any part of its entire length from where it emerges out of the water to its summit is wide enough to support a man.

The *Kite* reached Upernavik about midnight of July 17, and on the noon of the following day, the members of the expedition having paid their respects to Inspector Andersen and Mr. Byers, the governor of the settlement, the voyage was resumed, the *Kite* being pushed rapidly toward Duck Island.

The sun shone with all its power and made the day uncomfortably warm. There was also a heavy sea running and the vessel pitched and tossed dreadfully. Towards night, however, the sea had become more calm, but there was a thick fog, so that it became impossible to see more than a few boat lengths ahead. Through this damp curtain the *Kite* slowly groped her way till morning, when the fog lifted and Duck Island appeared but a few ship's lengths on the starboard. A boat was lowered at once, and an eager lot of hunters were rowed ashore, including the Professor and our

interpreter, Daniel, the latter two bent on the more peaceful occupation of egg gathering. Within five minutes after landing the hunters were merrily banging away, spreading carnage and death among the eider ducks which flew by the thousands affrighted over the rocky little island. At length their cartridges gave out, and one by one they reluctantly returned over the rocks to the boat, tired but happy, and bending under the weight of the large and toothsome birds they had slaughtered.

Soon after the *Kite* once more got under way the fog came on again, and progress was so slow that although under favorable conditions it is but a few hours' sail, it was not until early on the following morning that the vessel entered the dreaded Melville Bay, and was abreast of Devil's Thumb. Between the latter point and the ship was a vast field of ice but to the left and ahead was clear water. This was a source of great satisfaction to Captain Pike, as it was at this point the *Kite* was caught last year and detained three weeks by pack-ice.

The *Kite* was not to have clear sailing very long, however, for in three hours after entering the bay there was ice about on all sides, and Mr. Dumphy was kept busy in the crow's nest calling, "port," "steady," "starboard," "steady," until the very echoes seemed to take up and repeat the words. Fortunately the cakes, though many of them were miles in extent, were rotten, and when a lead ended it was comparatively an easy task for the *Kite* to butt her way through to the next

lead without more damage than the smashing of a few pieces of loose crockery in the galley, so that the tyros in Arctic navigation began to think Melville Bay was not the terrible place it had been described. But before midnight they were undeceived. Shortly after ten o'clock they beheld about them a vast ice-field

ICE-SAILING.

stretching ahead, and to the east and west, as far as the eye could reach in one unbroken sheet, and at the same time the lead behind closed up, leaving the vessel locked in a lake of water barely large enough to hold her. Reluctantly Captain Pike gave the order to "burn her down," and made preparations to take things

easy until a lead should open up and let the ship through. Towards morning the chance came, but a few hours later the vessel was tied up again, this time enveloped in a dense fog. When at length a lead was found, the fog still remained, lifting only just long enough for the *Kite* to avoid running against two icebergs which towered high above the mainmast.

One of these bergs is well known as the vast mountain of ice which has been grounded in Melville Bay since 1857, when it was observed and located by McClintock. A moment later a faint outline of the Sabine Islands was seen in the distance and then the fog fell again. These islands have been the scene of many Arctic troubles. Near them Hayes was caught in 1867 in the *Panther*. In their vicinity also, McClintock floated about all winter in the *Fox*, locked fast in the ice. Here, too, the *Princess Charlotte*, commanded by Captain Deuchers, was nipped and lost, giving the crew but ten minutes time to escape.

Nevertheless, regardless of the fog, in spite of the ice, the *Kite* moved more or less steadily forward with such good results that early on Friday morning, July 22, she had passed through Melville Bay and was at Cape York, with a record to her credit of the third fastest passage ever made through those waters by any expedition ; the first and second best records, it may be remarked, were also made by Captain Pike.

CHAPTER VII.

THE CAPE YORK AND NEHELUMIE ESKIMOS.—DISTRIBUTION OF GIFTS.—MEETING GIBSON, DR. COOK AND VERHOEFF.

AS the *Kite* approached the shores of Cape York voices were heard crying: "Ki-mo! Ki-mo!" and a few minutes later, as the vessel was brought to, the whole tribe of wild, fur-clad Eskimos, who dwell there, appeared on the shore. Some made their way to the ship, over the floe ice, pushing sledges, while others came through leads in rude kajaks. A kajaker was the first to come on board, but he was speedily followed by the others. More than twenty of them were soon on deck, chattering with all their might and main, and desirous of trading.

Just before arriving at Cape York, Prof. Heilprin had directed that a number of the long nickory spear-handles be brought on deck. These the huskies presently espied and began to seize, and it was only with the greatest difficulty that they could be restrained from removing them at once. They then gave free vent to their curiosity and swarmed over everything, not even the engine-room, the forecastle, or the rigging escaping a visit. The first efforts of Prof. Heilprin were directed to the obtaining, if possible, of some news of Lieut. Peary, and with the aid of Daniel, the interpreter,

he found a Cape York huskie, who said that he had seen Peary and his party, enumerating them all by name, seven persons and two dogs. He also drew a chart of the region, putting down with fair correctness the position of the three islands of Whale Sound and of Cape Cleveland on McCormick Bay, upon which he said was the hut or "igloo" of Peary. Afterwards it was ascertained that the man had visited the place last winter and spent a month there.

Shortly after all hands went on shore. The spot where we landed was the summer home of the Cape York Eskimos. Their dwellings during this season are tents of skin, called "tupics"; their winter quarters, or "igloos," were some distance further on, and just now dismantled in order to allow the elements to do a little cleansing of the interiors.

There were six tents or tupics in the settlement, and these housed probably thirty or thirty-five men, women and children. Judging from the numerous caches planted all around, the people had been exceedingly fortunate in their season's hunting and were laying up a good store of food for winter use.

The natives of Cape York seem to be rapidly advancing in their knowledge of the uses of the kajak, for when the Peary party and the West Greenland expedition visited the place last year they found but two of the rudest character; but this year every man owned one of these useful boats, and these of a greatly improved pattern, though yet far from being as handsome in model

as those of South Greenland. They have, however, the advantage of greater beam and therefore are not nearly so cranky.

Next to their kajaks and dogs, it was evident that the Cape York Eskimos prized a gun, and the three weapons of this character in this settlement were jealously cherished. Two of these were rifles which they had received from the West Greenland party last year, and were repeaters. The third gun, however, was a curiosity. It was an old musket barrel to which a huskie had fitted a stock made out of a piece of one inch pine board, and to which he had attached, very ingeniously, a hammer and trigger manufactured out of an old six-penny nail and a piece of ivory. No white man would have discharged the gun for any consideration, but its owner had no such feeling and fired off a load of powder which was given him, without misgivings, seemingly very proud of the way it banged.

At Cape York the first distribution of gifts sent by the benevolent people of Philadelphia for the Eskimos was made, and surely, had those who contributed the material witnessed the scene, they would have felt satisfied that their charity was well bestowed. The Eskimos were taken aboard ship where they were drawn up in line and each individual given some articles useful to him in his daily life. To the men were presented wood for sledges and kajaks and the tools wherewith to make them—saws, files, knives, planes, braces and bits, also some of the hickory spear handles and iron for harpoons.

The wood, which is more precious than gold, was received with the liveliest manifestations of pleasure and the women nearly went wild over the thimbles, knives, scissors, needles and kettles which were bestowed upon them.

When the distribution was over the recipients ran around the deck howling and singing for very joy, and of Daniel they repeatedly asked, why it was they were given such precious things for nothing. He was directed to explain, saying, after he had done as requested: "I speakem American man good. They savvey me, and speakem American man plenty good, and say thank you."

After they had been quieted down they were taken into the forecastle and given a hearty repast, which had been ordered to be prepared for them by Captain Pike, and from the way they devoured what was set before them it was evident they enjoyed their meal.

At length, and after some difficulty, the natives were cleared off, and the *Kite* resumed her voyage, running along the famous Crimson Cliffs, so-called from their peculiarly bright red color, caused by the lichens and red snow which covers their granite rocks. As progress was made the glaciers, which hitherto had been seen only at wide intervals, now followed each other in rapid succession, some comparatively small in extent, others of enormous dimensions. No two were alike; they were of a bewildering variety of forms, advancing, retreating, falling, hanging, some winding through tortuous valleys,

others sweeping straight from the great ice-cap, which rose everywhere in a great dome beyond the hills, while still another class was almost flat like a *mer de glace.* One glacier was apparently smooth and without crevasses, another cut with frightful seams and chasms; some terminated on the land, while others discharged their streams of ice directly into the sea. One of these rivers of ice, which is called the Petowik glacier, is over seven miles across, and its face projecting above the sea is estimated to be more than 100 feet high.

About midnight of July 22, the *Kite* arrived at Conical Rock, a small cone-shaped island, where search was made for traces of the Peary party, who had promised to leave such in case they made an early start southward in open boats. Up to this time, while the weather had been frequently cold, it had not been uncomfortably so, but here for the first time in addition to the low temperature, which stood at 30°, a strong wind was blowing, and for greater comfort the big winter ulsters were brought out and proved none too warm. The *Kite* steamed slowly around the island and every point was carefully scanned, but without finding anything to indicate that the persons sought had been there, and the ship was headed for Wolstenholme Island on a similar search. This place was reached four hours later.

When last winter it was determined to send an expedition to the relief of Lieut. Peary and his party, Professor Heilprin had sent a barrel containing a letter to that effect to St. Johns, with a request that it be

forwarded by some whaler to Wolstenholme Island for deposit on its west side, the side most likely to be visited by a retreating party. The barrel was given in charge of Captain Jeffrey Phillips, of the steamship *Eskimos*, who faithfully performed the work entrusted to him. The barrel was readily found; it was gaudily painted and set on a prominent rock and further indicated by a flagstaff. On examining its contents, in addition to the letter it contained from the Professor, another was found from Captain Phillips, as follows:

S. S. ESKIMOS, June 13, 1892.

To Lieut. R. E. Peary, U. S. N.:

SIR:—This cask was delivered to me at St. Johns, to be left for you at Wolstenholme Island. Wishing you every success in your undertaking, and with the hope that this will find you all well, I am faithfully yours,

JEFFREY PHILLIPS.

From the time the ship left Upernavik to her arrival at Wolstenholme Island those aboard her had been treated to almost continuous fogs, or to chilly and gloomy days; but soon after leaving this island the atmosphere cleared as if by magic. The sky became blue, the sun shone out brightly, and the temperature rose rapidly from the freezing point until it became almost uncomfortably warm. In fact, by the time Cape Parry was neared, and at the settlement of the Nehelumie Eskimos, all hands were perspiring as freely as on a July day at home. These Eskimos, who were mistaken last year for the

Ittiblus appeared, if anything, more joyful at the approach of the ship than those of Cape York, and swarmed about the "oomiakswa," as they call large vessels, with incessant cries of "Ki-mo! Ki-mo!" (welcome! welcome!) Far wilder in dress and appearance than the natives at Cape York, they were yet the same

SVARTEN HUK.

filthy, good-natured huskies, that clambered over the ship's side and stood upon the deck, chattering like parrots and laughing at everything in sight, including the members' own precious persons. Those of the party who suffered the most in this particular were the unfortunates who were compelled to wear glasses, and later,

on shore, those who stumbled and fell while climbing over the rocks. These last the huskies derisively called "pickaninnies" (children), and among those who earned the title was jolly Captain Pike.

Captain Pike, however, returned good for evil by giving them a good meal, which they devoured with that ravenous appetite said, not unjustly, to be one of the chief characteristics of the dwellers of the Arctic regions. When their appetites had been satisfied, the voyagers went ashore to visit them at their tupics, which numbered eleven, and sheltered thirty-six men, women and children. The settlement is delightfully situated on the northeast side of Borden Bay, where the grass grew luxuriantly and other vegetation abounded.

For an hour or more after landing the place presented a lively scene. Needles, knives, scissors, thimbles and other useful things were produced from the capacious pockets of the members of the expedition and exhibited to the delighted Eskimos, who eagerly accepted them in exchange for toys, articles used in the hunt and household, so that when the bartering was over, the Academy of Natural Sciences had secured a rich collection of West Greenland ethnological material. In the trading both parties were satisfied; the members of the relief expedition considered that they got more than value given, while the huskies firmly believed they had the advantage of the explorers. Having finished trading, as at Cape York a distribution of gifts was in order, and the men, women and children were made almost frantically

happy by the abundance of wood and materials for kajaks, sledges and harpoons. So excited did they become that the noses of fully one-half of the people bled profusely (said to be a peculiarity of the Eskimos when deeply moved); and when at length the *Kite* sailed away, she was followed for more than a mile by excited kajakers, yelling "Tapausi, American man!" and one, to show his gratitude, rowed close to the ship's side and threw his harpoon line aboard, with the exclamation, "Wonga pelitay ibli" (I give it to you).

At Hakluyt Island was passed a curious formation known as Bell Rock, which excited the admiration of everybody on board. The rock is a nearly circular shaft of basalt which rises more than 600 feet above the water and through an immense *talus* takes on the exact form of a bell. It is brought out in stronger relief by the pure white background of a large glacier and the ice-cap shining as white to the right and left.

The *Kite* was now within only a few hours' journey of McCormick Bay and the excitement of the members of the relief expedition rose almost to fever heat. When at length the outermost cape of the bay came into view the magnificent panorama of the coast was disregarded. All eyes were eagerly directed towards the cape with the wild hope that something of Peary's party might be seen, though it was still ten miles off to Red Cliff House.

Even Captain Pike caught the infectious excitement and kept the air filled with the booming of the little cannon and the shrill shrieks of the steam whistle.

Presently Mr. Dumphy, who was in the crow's-nest directing the *Kite's* passage through the ice-sheets, with a yell announced that he saw a moving speck on the water at the entrance of McCormick Bay. Telescopes were immediately trained on the place indicated. The speck was seen, black against a huge white iceberg, but so small that nothing could be made of it, except that it was moving towards the *Kite*. Slowly—oh ! how slowly to the anxious minds of those on board—the object grew larger and finally took on the form of a boat, in which were a number of persons. Then Mr. Dumphy, still in his post at the top of the foremast, sent a spasm of terror into the breasts of the party by shouting in an excited tone : "By God, sir, they're all huskies in that whale boat ! They've killed the Peary party," but he almost instantly set all right by crying joyfully, "No, they're not, sir ; they're waving their arms ; they're all right !" By this time the anxious ones on board the *Kite* could see for themselves. There were several persons in the boat. Some of them were waving their arms and seemed to be jumping up and down, while the others were pulling at the oars as for their lives. Then, a few moments later, when the occupants were recognized as a portion of the Peary party who were being rowed by Eskimos, the scene on board was almost beyond description.

Sailors not on duty were in the rigging yelling, the second mate still in the crow's nest shouted himself hoarse, while the members of the expedition were cheer-

ing, shaking each other by the hands and behaving like men bereft of their senses. But the supreme moment came when the boat arrived alongside and Dr. Cook, Mr. Gibson and Mr. Verhoeff climbed up the side of the vessel and sprang on deck. Every one of the members of the relief expedition and the officers and crew of the *Kite* crowded around them with exulting handshakes and almost hysterical greetings. The three men appeared in splendid condition, muscular-looking, deeply tanned by exposure and, with the exception of Mr. Verhoeff, were dressed in full Eskimo costumes—reindeer coat and trousers and seal-skin boots that reached almost to their knees.

After the greetings were over, inquiries were made for Lieut. and Mrs. Peary, Mr. Astrup and the colored servant Henson. It was then learned that Lieut. Peary's leg had become sound again and that he and Mr. Astrup were on their great journey over the inland ice, but were expected back daily, and that Mrs. Peary and Henson had been for the ten days previous camping at the head of McCormick Bay awaiting their return.

By the time these questions had been asked and answered the *Kite* had passed the entrance of McCormick Bay and had been brought to in front of Lieut. Peary's winter quarters. It was a few minutes after eleven o'clock on the night of July 23.

CHAPTER VIII.

NEWS OF THE SHIP'S ARRIVAL TAKEN TO MRS. PEARY.—ESKIMO SIGNS OF AGE.—ATTACKING THE ICE-CAP.

ALTHOUGH it was near midnight when the *Kite* slowed up opposite Peary's headquarters, the sun shone with noonday brightness, and with flushed faces, to which the warmth of the weather contributed about evenly with the excitement of the recent meeting, and trembling with suppressed eagerness and impatience, scarce waiting for the propeller to cease revolving, the relief party manned the long boat. Quickly they rowed ashore toward Red Cliff House in which Lieut. and Mrs. Peary and their companions had spent the winter, and the Eskimos' settlement which had within the year of their sojourn sprung up around it. When they had landed Dr. Cook detailed a huskie to carry word to Mrs. Peary of the arrival of the *Kite*, and at the same time take to her a package of letters from her relatives in the United States. The distance to Mrs. Peary's camp was fifteen miles, but this notwithstanding, and although the presence of a ship is an object of almost irresistible attraction for the average huskie, Equa, the native selected by Dr. Cook, without a murmur made preparations for his journey, and in less than half an hour was paddling away in his kajak on his errand.

Somewhere about five o'clock in the morning Equa arrived at the head of McCormick Bay, and almost bursting with the news he had, rushed to the tent where Mrs. Peary was sleeping calmly, and without any ceremony poked his head within and shouted that the "oomiakswa" was come. The noise he made as well as the intelligence he brought roused Mrs. Peary to full wakefulness at once; but, although she had always looked forward to the possibility of a relief expedition coming, she knew something of the joking habits of the natives, and was inclined to disbelieve the tale Equa brought. She told him so in good Eskimos, a language which has the merit of brevity as well as directness. Not at all abashed or hurt at this doubt cast upon his veracity, Equa, like the good-natured huskie that he was, immediately proved his truthfulness by producing the letters and adding the information that Professor Heilprin was coming to see her the next day. Having thus vindicated his character, Equa betook himself once more to his kajak and paddled back with all speed to the settlement to join in the festivities which he felt must be in progress there.

Mrs. Peary's feelings on realizing that a party had come to their rescue can only be imagined; she says she was full of joy and thankfulness and there can be no doubt of the sincerity of her expressions, for however much she and her husband and their companions may have believed in the feasibility of the proposed escape to Upernavik in open whale boats, the prospect of such

a journey and the almost certain hardships which must attend it, could not have been of the most pleasant character.

Meanwhile the first happy hours of meeting were

ESKIMOS AT RED CLIFF HOUSE.

enjoyed by the relief party and the three remaining members of the Peary expedition at the headquarters. They looked through the cozy little Red Cliff House —as the Arctic mansion was called from the color of the cliffs near Cape Cleveland—and they wandered about

among the topics of the natives, keeping up the meanwhile a constant interchange of news. Wherever they went they were followed by the Eskimos, men, women and children, to whom the white men just arrived were as great curiosities as they themselves were to the white men. They criticised their clothing, their method of speaking was cause of surprise; but that which seemed to excite the greatest amazement in the minds of these people were the heavy beards which adorned the faces of all the party with one exception. As hair begins to grow on the faces of the average Eskimo only as old age approaches, the abundant hirsute growth about the mouths and chins of the visitors seemed to the natives conclusive proof that all were "very ancient men," and they marveled greatly that such old persons should have so upright a carriage and walk with such vigorous steps. In this respect also Dr. Cook had been all winter a source of wonderment, for he too wore a heavy beard.

About three or four o'clock in the morning the members of the relief expedition returned on board the *Kite* to rest.

On Monday morning, the day following, all but three of the relief expedition and Messrs. Gibson and Verhoeff with a number of Eskimos, rowed to Herbert Island some twenty miles distant on a reindeer hunt. Two others of the party with Daniel, the interpreter, ascended the cliffs behind Red Cliff House and made an attack on the inland ice, while Professor Heilprin tramped to the head of the bay on a visit to Mrs. Peary. He

spent several hours with her, during which he urged the propriety of her returning to the Red Cliff House to await the coming of Lieut. Peary there instead of in camp. In doing this Professor Heilprin was moved by the consideration that living in camp in isolation, and left a prey to her own thoughts, Mrs. Peary would brood over her husband's continued absence. To his surprise and pleasure, however, he found that the young wife's confidence in him was so complete that she had not the slightest doubt of his returning in safety to her within a few days of the time he expected. She persisted in her determination to remain and be the first to welcome Lieut. Peary back from his journey over the great ice-cap, and when Professor Heilprin learned this he ceased his efforts to induce her to come to Red Cliff House and join the party.

In the meanwhile the party of three who had undertaken to make an attack on the ice-cap, traveled from the shore back to the cliffs over a succession of ancient sea beaches rising one above the other like terraces, all of them being thickly strewn with shells. Flowers were found there growing in wild profusion, and butterflies and moths and bees without stings flew gaily about. Reaching the cliffs the ascent was begun and continued laboriously to the summit, which was reached at a height of about 2300 feet above sea level. Here a great stretch of table-land was come upon which extended right and left and two or three miles towards the interior. The surface was perfectly flat and for the most part

muddy and generally covered with small stones and pebbles. Muddy and stony as this ground was, however, as on the shelving beaches just traversed, flowers grew plentifully, the poppies especially being so thick that the ground seemed covered by a yellow carpet.

Two or three miles inland the edge of the eternal ice-cap was reached. Beginning with nèvè or granular ice, covering the ground only a few inches deep, as the party progressed it was found to grow deeper and firmer and gradually harden into the clear blue ice which in the interior of Greenland reaches a thickness of many thousand feet. This ice, however, does not appear on the surface. It is covered by a layer of snow varying from one to six or more feet in depth, frozen over with a thin crust, sometimes firm enough to bear a man's weight, but oftener just strong enough to be delusive and let the pedestrian through at the moment he fancies he is the most secure from such a catastrophe. For hundreds and hundreds of miles this great ice-cap rolls east and west and for the whole length of Greenland north and south it extends, with a cold white glare that is most terrifying. Indeed no living being save a white man will venture upon it. It is shunned by the Eskimos and all native animals and birds alike.

The little party traversed this ice-field for a mile or two and then returned to the ship, and early the next morning the hunters came from Herbert Island with several reindeer as proof of their prowess.

CHAPTER IX.

IN SMITH SOUND.—HAVES' WINTER QUARTERS—THE ICE BARRIER.—WALRUS HUNTING.—THE ETAH AND OTHER EXTREME NORTHERLY SETTLEMENTS.

ASCERTAINING that Lieut. Peary was hardly likely to return from the inland ice before the fourth or fifth of August, Professor Heilprin, after a consultation with his companions and Captain Pike, determined on making an effort to reach the great Humboldt Glacier. This vast river of ice, which extends from the seventy-ninth to the eightieth parallel, is believed to be the largest in the world, and no organized attempt has ever been made to explore it.

The start was made on the morning of Tuesday, July 26. Early in the afternoon the *Kite* passed Cape Alexander, made famous in Arctic expeditions, and entered Smith Sound. From this point the American shore could be seen quite plainly, and beyond it the peak of Mount Bolton, rising high above the surrounding country. It was a beautiful day and the sea being comparatively free from ice, the *Kite* was kept close to land so that the configuration of the coast could the better be observed. The glaciers all along are large and numerous, and these, with the bold and rugged coast line, combined to a scenery of singular beauty and interest. Sometimes

for miles the cliffs were almost entirely bare of snow, again they were buried deep in the mantle of winter. This was the more curious in that the hills seemed all about the same altitude—2000 feet. The rock effects, too, were odd ; such, perhaps, as Greenland only can exhibit. The strata were broken and contorted in every direction, and assumed most remarkable and grotesque shapes. The coloring also was extremely beautiful—red, brown, green, purple and white being the prevailing hues. In strong contrast to this picture was the American side. Along the coast line north and south and inland to the horizon not a bare rock was to be seen. Everything appeared to be covered by one vast ice sheet that gleamed cold and white in the sunlight without a sparkle. Indeed from Disko all the way up to the point now reached there was little to be seen on the Greenland coast to remind one of the cold and rigor of the climate. The air for the most part had been balmy and springlike, and insects, birds, flowers and grass were abundant. But, gazing at this desolate American shore, one realized for the first time that there were within the Arctic circle spots to be shunned by living beings, and that there was some ground for the terror which is generally inspired by the suggestion of a journey to the far North.

Soon after doubling Cape Alexander we saw and presently passed Point Foulke, one of the boundaries of Hartstene Bay, a place made memorable by Dr. Hayes, who spent one winter there. It is an ideal spot for an Arctic winter quarters. Sheltered by cliffs, which tower

more than 2000 feet in almost sheer precipices, and commanding a splendid view of the sea, one can well believe the story that Hayes and his party had what they called a "regular picnic" during the winter of 1860–'61.

All around now was historical ground. Not far below Point Foulke is the point of land on which Captain Pike spent the first night after the wreck of the *Proteus*, just two days over nine years ago. A few miles above is Littleton Island, at which the *Kite* arrived a few hours later. Here was found a quantity of coal which had been cached on the island for the use of the Greely party should they reach the place.

Up to this time everything had gone smoothly with us and all signs pointed to a speedy and successful voyage to the Humboldt Glacier, if not further. But for once fortune ceased to smile on the expedition. About ten o'clock on the night of July 25 the ice blink was seen in the sky ahead, and exactly at twelve o'clock the *Kite* ran her bow into a solid field of ice, which extended without a break from the Greenland to the American shores, making an impassible barrier to further progress.

Captain Pike made the vessel fast, and announced with evident satisfaction that he could take the *Kite* no further; that we ought to be satisfied anyhow, as no other vessel except the *Advance* and the *Polaris* had ever got so far north on the Greenland side as this one had. Captain Pike had not been hilarious at any time over this supplementary trip, and none of the party could

blame him, for from the ship was plainly visible the spot where the *Proteus* was lost, and the place therefore could not have very pleasant associations for him.

It was midnight, and with the sun high in the horizon, the scene was one to be remembered. Ahead of the vessel was the great field of ice, ten feet or more thick, its surface broken with great domes and hummocks, all shining in the bright sunlight like white marble. On the right was the Greenland coast, with its purpled red cliffs adorned with green grass and moss ; on the left the American shore in its white mantle of perpetual snow. On this last-named coast, just south of us, was the scene of the *Proteus* disaster, and just above, almost abeam, was Cape Sabine, where Greely and his party suffered such horrors. Beyond this could be seen on the same shores, Cape Hawks, Washington Irving Island, Cape Louis Napoleon, and nearly as far north as the eightieth parallel. On the Greenland coast, within half an hour's journey, was Rensselaer Bay, where Dr. Kane and his party spent the winters of 1853 and 1854, and suffered, and abandoned their ship, the staunch *Advance*.

While all were gazing upon the silent, wild desolation, the scenes among which many daring explorers underwent hardships, and some met death, the great stillness was suddenly interrupted by the barking of a dog from the Greenland shore. All started, thinking it might be one of the animals belonging to Lieut. Peary ; the *Kite* was cast loose from the ice and her prow turned coastward.

A WALRUS HERD.

She had not gone far when the strange barkings were heard on every side, and the mystery was solved ; we were in the midst of a vast herd of walrus.

The huge animals were either lying on the floes fast asleep or swimming, diving and barking. The long boat was promptly lowered, filled with enthusiastic hunters, who pushed off in chase. Coming upon a group of walrus dozing upon a cake of ice about half a mile from the ship, they fired into them and killed two. The others dived off the ice and disappeared as though in flight. But if any of the hunters in that long boat entertained such an idea it was soon dissipated. One of them, a great bull walrus, presently came to the surface about a hundred yards or so from the boat and swam rapidly away, roaring loudly and horribly as he did so. It seemed almost as though he was calling for assistance to wreak vengeance on the slayers of two of his comrades. Be it as it may, the water was soon fairly alive with an angry, bellowing herd, so numerous that Mr. Dumphy, the second mate, from his position on the deck of the *Kite*, exclaimed excitedly to the captain, "By George, sir, I believe all the walrus in Greenland are there, sir!"

With their eyes burning, their tusks gleaming, without a pause or sign of fear, the savage animals, bent on revenge, made a determined attack on the long boat, rearing from the water as they reached it in an attempt to get their tusks over the side.

Had they succeeded in this the entire party would have been doomed, but each member fought desperately.

Rifles, hatchets and harpoons were used with deadly effect, and each onslaught was successfully repelled, but it was not until a large number had been slain that the enemy acknowledged defeat and sullenly retired from the contest, leaving the victorious party to tow the two dead animals they had first shot in triumph to the ship, where it was estimated that the heavier of the two weighed more than half a ton.

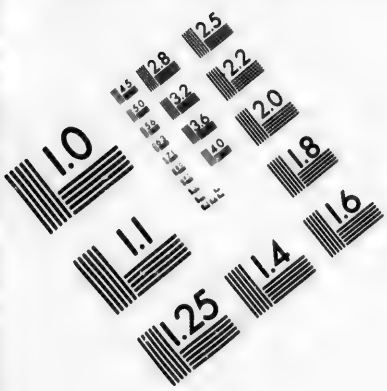
This exciting adventure only whetted the appetite of all hands for more; all of the available boats were filled with ardent sportsmen, and the whole day long the chase was kept up. Many more were slaughtered and nearly a dozen of the huge animals secured, and it is quite possible that the *Kite* would yet be in Smith Sound, and the members of the Peary Relief Expedition hunting walrus, had not Captain Pike towards evening insisted that it was time to begin the return voyage to McCormick Bay.

At Hartstene Bay a stop was made and a number of the party went ashore to visit the settlement of the Etah Eskimos. The spot was found readily enough, the abundant verdure on the shore, which characterizes all Eskimo settlements, affording a sure indication of its location. The place was found to be deserted, as was expected from information given by Dr. Cook, and it evidently had been abandoned for a long time, for the five stone igloos were, with one exception, in ruins, and the piles of bones and birdskins and other refuse in front of them overgrown with grass.

The Etah village is supposed to have been the most northerly settlement of human beings on the face of the globe. It was made famous by Kane, Hayes and other Arctic navigators, and the name of these Eskimos is familiar to the reader of every book of polar adventure. The one igloo not destroyed was large, handsome, substantially constructed, and contained two rooms. It

CATCHING AUK WITH NET.

was so superior to all the others in every respect that we fancied it might have been the one occupied on different occasions by Doctors Kane and Hayes. Its superiority was the more marked from the fact that the ruins of the remaining huts showed that all had been of more than usual excellence of construction. Every


1.0
1.1
1.25
1.4
1.6
1.8
2.0
2.2
2.5
2.8
3.2
3.6
4.0
4.5
5.0
5.6
6.3
7.1
8.0
9.0
10
11
12
13
14
15
16
17
18
19
20
22
25
28
32
36
40
45
50
56
63
71
80
90
100
110
125
140
160
180
200
220
250
280
320
360
400
450
500
560
630
710
800
900
1000
1100
1250
1400
1600
1800
2000
2200
2500
2800
3200
3600
4000
4500
5000
5600
6300
7100
8000
9000
10000
11000
12500
14000
16000
18000
20000
22000
25000
28000
32000
36000
40000
45000
50000
56000
63000
71000
80000
90000
100000
110000
125000
140000
160000
180000
200000
220000
250000
280000
320000
360000
400000
450000
500000
560000
630000
710000
800000
900000
1000000
1100000
1250000
1400000
1600000
1800000
2000000
2200000
2500000
2800000
3200000
3600000
4000000
4500000
5000000
5600000
6300000
7100000
8000000
9000000
10000000
11000000
12500000
14000000
16000000
18000000
20000000
22000000
25000000
28000000
32000000
36000000
40000000
45000000
50000000
56000000
63000000
71000000
80000000
90000000
100000000
110000000
125000000
140000000
160000000
180000000
200000000
220000000
250000000
280000000
320000000
360000000
400000000
450000000
500000000
560000000
630000000
710000000
800000000
900000000
1000000000
1100000000
1250000000
1400000000
1600000000
1800000000
2000000000
2200000000
2500000000
2800000000
3200000000
3600000000
4000000000
4500000000
5000000000
5600000000
6300000000
7100000000
8000000000
9000000000
10000000000
11000000000
12500000000
14000000000
16000000000
18000000000
20000000000
22000000000
25000000000
28000000000
32000000000
36000000000
40000000000
45000000000
50000000000
56000000000
63000000000
71000000000
80000000000
90000000000
100000000000
110000000000
125000000000
140000000000
160000000000
180000000000
200000000000
220000000000
250000000000
280000000000
320000000000
360000000000
400000000000
450000000000
500000000000
560000000000
630000000000
710000000000
800000000000
900000000000
1000000000000
1100000000000
1250000000000
1400000000000
1600000000000
1800000000000
2000000000000
2200000000000
2500000000000
2800000000000
3200000000000
3600000000000
4000000000000
4500000000000
5000000000000
5600000000000
6300000000000
7100000000000
8000000000000
9000000000000
10000000000000
11000000000000
12500000000000
14000000000000
16000000000000
18000000000000
20000000000000
22000000000000
25000000000000
28000000000000
32000000000000
36000000000000
40000000000000
45000000000000
50000000000000
56000000000000
63000000000000
71000000000000
80000000000000
90000000000000
100000000000000
110000000000000
125000000000000
140000000000000
160000000000000
180000000000000
200000000000000
220000000000000
250000000000000
280000000000000
320000000000000
360000000000000
400000000000000
450000000000000
500000000000000
560000000000000
630000000000000
710000000000000
800000000000000
900000000000000
1000000000000000
1100000000000000
1250000000000000
1400000000000000
1600000000000000
1800000000000000
2000000000000000
2200000000000000
2500000000000000
2800000000000000
3200000000000000
3600000000000000
4000000000000000
4500000000000000
5000000000000000
5600000000000000
6300000000000000
7100000000000000
8000000000000000
9000000000000000
10000000000000000
11000000000000000
12500000000000000
14000000000000000
16000000000000000
18000000000000000
20000000000000000
22000000000000000
25000000000000000
28000000000000000
32000000000000000
36000000000000000
40000000000000000
45000000000000000
50000000000000000
56000000000000000
63000000000000000
71000000000000000
80000000000000000
90000000000000000
100000000000000000
110000000000000000
125000000000000000
140000000000000000
160000000000000000
180000000000000000
200000000000000000
220000000000000000
250000000000000000
280000000000000000
320000000000000000
360000000000000000
400000000000000000
450000000000000000
500000000000000000
560000000000000000
630000000000000000
710000000000000000
800000000000000000
900000000000000000
1000000000000000000
1100000000000000000
1250000000000000000
1400000000000000000
1600000000000000000
1800000000000000000
2000000000000000000
2200000000000000000
2500000000000000000
2800000000000000000
3200000000000000000
3600000000000000000
4000000000000000000
4500000000000000000
5000000000000000000
5600000000000000000
6300000000000000000
7100000000000000000
8000000000000000000
9000000000000000000
10000000000000000000
11000000000000000000
12500000000000000000
14000000000000000000
16000000000000000000
18000000000000000000
20000000000000000000
22000000000000000000
25000000000000000000
28000000000000000000
32000000000000000000
36000000000000000000
40000000000000000000
45000000000000000000
50000000000000000000
56000000000000000000
63000000000000000000
71000000000000000000
80000000000000000000
90000000000000000000
100000000000000000000
110000000000000000000
125000000000000000000
140000000000000000000
160000000000000000000
180000000000000000000
200000000000000000000
220000000000000000000
250000000000000000000
280000000000000000000
320000000000000000000
360000000000000000000
400000000000000000000
450000000000000000000
500000000000000000000
560000000000000000000
630000000000000000000
710000000000000000000
800000000000000000000
900000000000000000000
1000000000000000000000
1100000000000000000000
1250000000000000000000
1400000000000000000000
1600000000000000000000
1800000000000000000000
2000000000000000000000
2200000000000000000000
2500000000000000000000
2800000000000000000000
3200000000000000000000
3600000000000000000000
4000000000000000000000
4500000000000000000000
5000000000000000000000
5600000000000000000000
6300000000000000000000
7100000000000000000000
8000000000000000000000
9000000000000000000000
10000000000000000000000
11000000000000000000000
12500000000000000000000
14000000000000000000000
16000000000000000000000
18000000000000000000000
20000000000000000000000
22000000000000000000000
25000000000000000000000
28000000000000000000000
32000000000000000000000
36000000000000000000000
40000000000000000000000
45000000000000000000000
50000000000000000000000
56000000000000000000000
63000000000000000000000
71000000000000000000000
80000000000000000000000
90000000000000000000000
100000000000000000000000
110000000000000000000000
125000000000000000000000
140000000000000000000000
160000000000000000000000
180000000000000000000000
200000000000000000000000
220000000000000000000000
250000000000000000000000
280000000000000000000000
320000000000000000000000
360000000000000000000000
400000000000000000000000
450000000000000000000000
500000000000000000000000
560000000000000000000000
630000000000000000000000
710000000000000000000000
800000000000000000000000
900000000000000000000000
1000000000000000000000000
1100000000000000000000000
1250000000000000000000000
1400000000000000000000000
1600000000000000000000000
1800000000000000000000000
2000000000000000000000000
2200000000000000000000000
2500000000000000000000000
2800000000000000000000000
3200000000000000000000000
3600000000000000000000000
4000000000000000000000000
4500000000000000000000000
5000000000000000000000000
5600000000000000000000000
6300000000000000000000000
7100000000000000000000000
8000000000000000000000000
9000000000000000000000000
10000000000000000000000000
11000000000000000000000000
12500000000000000000000000
14000000000000000000000000
16000000000000000000000000
18000000000000000000000000
20000000000000000000000000
22000000000000000000000000
25000000000000000000000000
28000000000000000000000000
32000000000000000000000000
36000000000000000000000000
40000000000000000000000000
45000000000000000000000000
50000000000000000000000000
56000000000000000000000000
63000000000000000000000000
71000000000000000000000000
80000000000000000000000000
90000000000000000000000000
100000000000000000000000000
110000000000000000000000000
125000000000000000000000000
140000000000000000000000000
160000000000000000000000000
180000000000000000000000000
200000000000000000000000000
220000000000000000000000000
250000000000000000000000000
280000000000000000000000000
320000000000000000000000000
360000000000000000000000000
400000000000000000000000000
450000000000000000000000000
500000000000000000000000000
560000000000000000000000000
630000000000000000000000000
710000000000000000000000000
800000000000000000000000000
900000000000000000000000000
1000000000000000000000000000
1100000000000000000000000000
1250000000000000000000000000
1400000000000000000000000000
1600000000000000000000000000
1800000000000000000000000000
2000000000000000000000000000
2200000000000000000000000000
2500000000000000000000000000
2800000000000000000000000000
3200000000000000000000000000
3600000000000000000000000000
4000000000000000000000000000
4500000000000000000000000000
5000000000000000000000000000
5600000000000000000000000000
6300000000000000000000000000
7100000000000000000000000000
8000000000000000000000000000
9000000000000000000000000000
10000000000000000000000000000
11000000000000000000000000000
12500000000000000000000000000
14000000000000000000000000000
16000000000000000000000000000
18000000000000000000000000000
20000000000000000000000000000
22000000000000000000000000000
25000000000000000000000000000
28000000000000000000000000000
32000000000000000000000000000
36000000000000000000000000000
40000000000000000000000000000
45000000000000000000000000000
50000000000000000000000000000
56000000000000000000000000000
63000000000000000000000000000
71000000000000000000000000000
80000000000000000000000000000
90000000000000000000000000000
100000000000000000000000000000
110000000000000000000000000000
125000000000000000000000000000
140000000000000000000000000000
160000000000000000000000000000
180000000000000000000000000000
200000000000000000000000000000
220000000000000000000000000000
250000000000000000000000000000
280000000000000000000000000000
320000000000000000000000000000
360000000000000000000000000000
400000000000000000000000000000
450000000000000000000000000000
500000000000000000000000000000
560000000000000000000000000000
630000000000000000000000000000
710000000000000000000000000000
800000000000000000000000000000
900000000000000000000000000000
1000000000000000000000000000000
1100000000000000000000000000000
1250000000000000000000000000000
1400000000000000000000000000000
1600000000000000000000000000000
1800000000000000000000000000000
2000000000000000000000000000000
2200000000000000000000000000000
2500000000000000000000000000000
2800000000000000000000000000000
3200000000000000000000000000000
3600000000000000000000000000000
4000000000000000000000000000000
4500000000000000000000000000000
5000000000000000000000000000000
5600000000000000000000000000000
6300000000000000000000000000000
7100000000000000000000000000000
8000000000000000000000000000000
9000000000000000000000000000000
10000000000000000000000000000000
11000000000000000000000000000000
12500000000000000000000000000000
14000000000000000000000000000000
16000000000000000000000000000000
18000000000000000000000000000000
20000000000000000000000000000000
22000000000000000000000000000000
25000000000000000000000000000000
28000000000000000000000000000000
32000000000000000000000000000000
36000000000000000000000000000000
40000000000000000000000000000000
45000000000000000000000000000000
50000000000000000000000000000000
56000000000000000000000000000000
63000000000000000000000000000000
71000000000000000000000000000000
80000000000000000000000000000000
90000000000000000000000000000000
100000000000000000000000000000000
110000000000000000000000000000000
125000000000000000000000000000000
140000000000000000000000000000000
160000000000000000000000000000000
180000000000000000000000000000000
200000000000000000000000000000000
220000000000000000000000000000000
250000000000000000000000000000000
280000000000000000000000000000000
320000000000000000000000000000000
360000000000000000000000000000000
400000000000000000000000000000000
450000000000000000000000000000000
500000000000000000000000000000000
560000000000000000000000000000000
630000000000000000000000000000000
710000000000000000000000000000000
800000000000000000000000000000000
900000000000000000000000000000000
1000000000000000000000000000000000
1100000000000000000000000000000000
1250000000000000000000000000000000
1400000000000000000000000000000000
1600000000000000000000000000000000
1800000000000000000000000000000000
2000000000000000000000000000000000
2200000000000000000000000000000000
2500000000000000000000000000000000
2800000000000000000000000000000000
3200000000000000000000000000000000
3600000000000000000000000000000000
4000000000000000000000000000000000
4500000000000000000000000000000000
5000000000000000000000000000000000
5600000000000000000000000000000000
6300000000000000000000000000000000
7100000000000000000000000000000000
8000000000000000000000000000000000
9000000000000000000000000000000000
10000000000000000000000000000000000
11000000000000000000000000000000000
12500000000000000000000000000000000
14000000000000000000000000000000000
16000000000000000000000000000000000
18000000000000000000000000000000000
20000000000000000000000000000000000
22000000000000000000000000000000000
25000000000000000000000000000000000
28000000000000000000000000000000000
32000000000000000000000000000000000
36000000000000000000000000000000000
40000000000000000000000000000000000
45000000000000000000000000000000000
50000000000000000000000000000000000
56000000000000000000000000000000000
63000000000000000000000000000000000
71000000000000000000000000000000000
80000000000000000000000000000000000
90000000000000000000000000000000000
100000000000000000000000000000000000
110000000000000000000000000000000000
125000000000000000000000000000000000
140000000000000000000000000000000000
160000000000000000000000000000000000
180000000000000000000000000000000000
200000000000000000000000000000000000
220000000000000000000000000000000000
250000000000000000000000000000000000
280000000000000000000000000000000000
320000000000000000000000000000000000
360000000000000000000000000000000000
400000000000000000000000000000000000
450000000000000000000000000000000000
500000000000000000000000000000000000
560000000000000000000000000000000000
630000000000000000000000000000000000
710000000000000000000000000000000000
800000000000000000000000000000000000
900000000000000000000000000000000000
1000000000000000000000000000000000000
1100000000000000000000000000000000000
1250000000000000000000000000000000000
1400000000000000000000000000000000000
1600000000000000000000000000000000000
1800000000000000000000000000000000000
2000000000000000000000000000000000000
2200000000000000000000000000000000000
2500000000000000000000000000000000000
2800000000000000000000000000000000000
3200000000000000000000000000000000000
3600000000000000000000000000000000000
4000000000000000000000000000000000000
4500000000000000000000000000000000000
5000000000000000000000000000000000000
5600000000000000000000000000000000000
6300000000000000000000000000000000000
7100000000000000000000000000000000000
8000000000000000000000000000000000000
9000000000000000000000000000000000000
10000000000000000000000000000000000000
11000000000000000000000000000000000000
12500000000000000000000000000000000000
14000000000000000000000000000000000000
16000000000000000000000000000000000000
18000000000000000000000000000000000000
20000000000000000000000000000000000000
22000000000000000000000000000000000000
25000000000000000000000000000000000000
28000000000000000000000000000000000000
32000000000000000000000000000000000000
36000000000000000000000000000000000000
40000000000000000000000000000000000000
45000000000000000000000000000000000000
50000000000000000000000000000000000000
56000000000000000000000000000000000000
63000000000000000000000000000000000000
71000000000000000000000000000000000000
80000000000000000000000000000000000000
90000000000000000000000000000000000000
100000000000000000000000000000000000000
110000000000000000000000000000000000000
125000000000000000000000000000000000000
140000000000000000000000000000000000000
160000000000000000000000000000000000000
180000000000000000000000000000000000000
200000000000000000000000000000000000000
220000000000000000000000000000000000000
250000000000000000000000000000000000000
280000000000000000000000000000000000000
320000000000000000000000000000000000000
360000000000000000000000000000000000000
400000000000000000000000000000000000000
450000000000000000000000000000000000000
500000000000000000000000000000000000000
560000000000000000000000000000000000000
630000000000000000000000000000000000000
710000000000000000000000000000000000000
800000000000000000000000000000000000000
900000000000000000000000000000000000000
1000000000000000000000000000000000000000
1100000000000000000000000000000000000000
1250000000000000000000000000000000000000
1400000000000000000000000000000000000000
1600000000000000000000000000000000000000
1800000000000000000000000000000000000000
2000000000000000000000000000000000000000
2200000000000000000000000000000000000000
2500000000000000000000000000000000000000
2800000000000000000000000000000000000000
3200000000000000000000000000000000000000
3600000000000000000000000000000000000000
4000000000000000000000000000000000000000
4500000000000000000000000000000000000000
5000000000000000000000000000000000000000
5600000000000000000000000000000000000000
6300000000000000000000000000000000000000
7100000000000000000000000000000000000000
8000000000000000000000000000000000000000
9000000000000000000000000000000000000000
10000000000000000000000000000000000000000
11000000000000000000000000000000000000000
12500000000000000000000000000000000000000
14000000000000000000000000000000000000000
16000000000000000000000000000000000000000
18000000000000000000000000000000000000000
20000000000000000000000000000000000000000
22000000000000000000000000000000000000000
25000000000000000000000000000000000000000
28000000000000000000000000000000000000000
32000000000000000000000000000000000000000
36000000000000000000000000000000000000000
40000000000000000000000000000000000000000
45000000000000000000000000000000000000000
50000000000000000000000000000000000000000
56000000000000000000000000000000000000000
63000000000000000000000000000000000000000
71000000000000000000000000000000000000000
80000000000000000000000000000000000000000
90000000000000000000000000000000000000000
100000000000000000000000000000000000000000
110000000000000000000000000000000000000000
125000000000000000000000000000000000000000
140000000000000000000000000000000000000000
160000000000000000000000000000000000000000
180000000000000000000000000000000000000000
200000000000000000000000000000000000000000
220000000000000000000000000000000000000000
250000000000000000000000000000000000000000
280000000000000000000000000000000000000000
320000000000000000000000000000000000000000
360000000000000000000000000000000000000000
400000000000000000000000000000000000000000
450000000000000000000000000000000000000000
500000000000000000000000000000000000000000
560000000000000000000000000000000000000000
630000000000000000000000000000000000000000
710000000000000000000000000000000000000000
800000000000000000000000000000000000000000
900000000000000000000000000000000000000000
1000000000000000000000000000000000000000000
1100000000000000000000000000000000000000000
1250000000000000000000000000000000000000000
1400000000000000000000000000000000000000000
1600000000000000000000000000000000000000000
1800000000000000000000000000000000000000000
2000000000000000000000000000000000000000000
2200000000000000000000000000000000000000000
2500000000000000000000000000000000000000000
2800000000000000000000000000000000000000000
3200000000000000000000000000000000000000000
3600000000000000000000000000000000000000000
4000000000000000000000000000000000000000000
4500000000000000000000000000000000000000000
5000000000000000000000000000000000000000000
5600000000000000000000000000000000000000000
6300000000000000000000000000000000000000000
7100000000000000000000000000000000000000000
8000000000000000000000000000000000000000000
9000000000000000000000000000000000000000000
10000000000000000000000000000000000000000000
11000000000000000000000000000000000000000000
12500000000000000000000000000000000000000000
14000000000000000000000000000000000000000000
16000000000000000000000000000000000000000000
18000000000000000000000000000000000000000000
20000000000000000000000000000000000000000000
22000000000000000000000000000000000000000000
25000000000000000000000000000000000000000000
28000000000000000000000000000000000000000000
32000000000000000000000000000000000000000000
36000000000000000000000000000000000000000000
40000000000000000000000000000000000000000000
45000000000000000000000000000000000000000000
50000000000000000000000000000000000000000000
56000000000000000000000000000000000000000000
63000000000000000000000000000000000000000000
71000000000000000000000000000000000000000000
80000000000000000000000000000000000000000000
90000000000000000000000000000000000000000000
100000000000000000000000000000000000000000000
110000000000000000000000000000000000000000000
125000000000000000000000000000000000000000000
140000000000000000000000000000000000000000000
160000000000000000000000000000000000000000000
180000000000000000000000000000000000000000000
200000000000000000000000000000000000000000000
220000000000000000000000000000000000000000000
250000000000000000000000000000000000000000000
280000000000000000000000000000000000000000000
320000000000000000000000000000000000000000000
360000000000000000000000000000000000000000000
400000000000000000000000000000000000000000000
450000000000000000000000000000000000000000000
500000000000000000000000000000000000000000000
560000000000000000000000000000000000000000000
630000000000000000000000000000000000000000000
710000000000000000000000000000000000000000000
800000000000000000000000000000000000000000000
900000000000000000000000000000000000000000000
1000000000000000000000000000000000000000000000
1100000000000000000000000000000000000000000000
1250000000000000000000000000000000000000000000
1400000000000000000000000000000000000000000000
1600000000000000000000000000000000000000000000
1800000000000000000000000000000000000000000000
2000000000000000000000000000000000000000000000
2200000000000000000000000000000000000000000000
2500000000000000000000000000000000000000000000
2800000000000000000000000000000000000000000000
3200000000000000000000000000000000000000000000
3600000000000000000000000000000000000000000000
4000000000000000000000000000000000000000000000
4500000000000000000000000000000000000000000000
5000000000000000000000000000000000000000000000
5600000000000000000000000000000000000000000000
6300000000000000000000000000000000000000000000
7100000000000000000000000000000000000000000000
8000000000000000000000000000000000000000000000
9000000000000000000000000000000000000000000000
10000000000000000000000000000000000000000000000
11000000000000000000000000000000000000000000000
12500000000000000000000000000000000000000000000
14000000000000000000000000000000000000000000000
16000000000000000000000000000000000000000000000
18000000000000000000000000000000000000000000000
20000000000000000000000000000000000000000000000
22000000000000000000000000000000000000000000000
25000000000000000000000000000000000000000000000
28000000000000000000000000000000000000000000000
32000000000000000000000000000000000000000000000
36000000000000000000000000000000000000000000000
40000000000000000000000000000000000000000000000
45000000000000000000000000000000000000000000000
50000000000000000000000000000000000000000000000
56000000000000000000000000000000000000000000000
63000000000000000000000000000000000000000000000
71000000000000000000000000000000000000000000000
80000000000000000000000000000000000000000000000
90000000000000000000000000000000000000000000000
100000000000000000000000000000000000000000000000
110000000000000000000000000000000000000000000000
125000000000000000000000000000000000000000000000
140000000000000000000000000000000000000000000000
160000000000000000000000000000000000000000000000
180000000000000000000000000000000000000000000000
200000000000000000000000000000000000000000000000
220000000000000000000000000000000000000000000000
250000000000000000000000000000000000000000000000
280000000000000000000000000000000000000000000000
320000000000000000000000000000000000000000000000
360000000000000000000000000000000000000000000000
400000000000000000000000000000000000000000000000
450000000000000000000000000000000000000000000000
500000000000000000000000000000000000000000000000
560000000000000000000000000000000000000000000000
630000000000000000000000000000000000000000000000
710000000000000000000000000000000000000000000000
800000000000000000000000000000000000000000000000
900000000000000000000000000000000000000000000000
1000000000000000000000000000000000000000000000000
1100000000000000000000000000000000000000000000000
1250000000000000000000000000000000000000000000000
1400000000000000000000000000000000000000000000000
1600000000000000000000000000000000000000000000000
1800000000000000000000000000000000000000000000000
2000000000000000000000000000000000000000000000000
2200000000000000000000000000000000000000000000000
2500000000000000000000000000000000000000000000000
2800000000000000000000000000000000000000000000000
3200000000000000000000000000000000000000000000000
3600000000000000000000000000000000000000000000000
4000000000000000000000000000000000000000000000000
4500000000000000000000000000000000000000000000000
5000000000000000000000000000000000000000000000000
5600000000000000000000000000000000000000000000000
6300000000000000000000000000000000000000000000000
7100000000000000000000000000000000000000000000000
8000000000000000000000000000000000000000000000000
9000000000000000000000000000000000000000000000000
10000000000000000000000000000000000000000000000000
11000000000000000000000000000000000000000000000000
12500000000000000000000000000000000000000000000000
14000000000000000000000000000000000000000000000000
16000000000000000000000000000000000000000000000000
18000000000000000000000000000000000000000000000000
20000000000000000000000000000000000000000000000000
22000000000000000000000000000000000000000000000000
25000000000000000000000000000000000000000000000000
28000000000000000000000000000000000000000000000000
32000000000000000000000000000000000000000000000000
36000000000000000000000000000000000000000000000000
40000000000000000000000000000000000000000000000000
45000000000000000000000000000000000000000000000000
50000000000000000000000000000000000000000000000000
56000000000000000000000000000000000000000000000000
63000000000000000000000000000000000000000000000000
71000000000000000000000000000000000000000000000000
80000000000000000000000000000000000000000000000000
90000000000000000000000000000000000000000000000000
100000000000000000000000000000000000000000000000000
110000000000000000000000000000000000000000000000000
125000000000000000000000000000000000000000000000000
140000000000000000000000000000000000000000000000000
160000000000000000000000000000000000000000000000000
180000000000000000000000000000000000000000000000000
200000000000000000000000000000000000000000000000000
220000000000000000000000000000000000000000000000000
250000000000000000000000000000000000000000000000000
280000000000000000000000000000000000000000000000000
320000000000000000000000000000000000000000000000000
360000000000000000000000000000000000000000000000000
400000000000000000000000000000000000000000000000000
450000000000000000000000000000000000000000000000000
500000000000000000000000000000000000000000000000000
560000000000000000000000000000000000000000000000000
630000000000000000000000000000000000000000000000000
710000000000000000000000000000000000000000000000000
800000000000000000000000000000000000000000000000000
900000000000000000000000000000000000000000000000000
1000000000000000000000000000000000000000000000000000
1100000000000000000000000000000000000000000000000000
1250000000000000000000000000000000000000000000000000
1400000000000000000000000000000000000000000000000000
1600000000000000000000000000000000000000000000000000
1800000000000000000000000000000000000000000000000000
2000000000000000000000000000000000000000000000000000
2200000000000000000000000000000000000000000000000000
2500000000000000000000000000000000000000000000000000
2800000000000000000000000000000000000000000000000000
3200000000000000000000000000000000000000000000000000
3600000000000000000000000000000000000000000000000000
4000000000000000000000000000000000000000000000000000
4500000000000000000000000000000000000000000000000000
5000000000000000000000000000000000000000000000000000
5600000000000000000000000000000000000000000000000000
6300000000000000000000000000000000000000000000000000
7100000000000000000000000000000000000000000000000000
8000000000000000000000000000000000000000000000000000
9000000000000000000000000000000000000000000000000000
10000000000000000000000000000000000000000000000000000
11000000000000000000000000000000000000000000000000000
12500000000000000000000000000000000000000000000000000
14000000000000000000000000000000000000000000000000000
16000000000000000000000000000000000000000000000000000
18000000000000000000000000000000000000000000000000000
20000000000000000000000000000000000000000000000000000
22000000000000000000000000000000000000000000000000000
25000000000000000000000000000000000000000000000000000
28000000000000000000000000000000000000000000000000000
32000000000000000000000000000000000000000000000000000
36000000000000000000000000000000000000000000000000000
40000000000000000000000000000000000000000000000000000
45000000000000000000000000000000000000000000000000000
50000000000000000000000000000000000000000000000000000
56000000000000000000000000000000000000000000000000000
63000000000000000000000000000000000000000000000000000
71000000000000000000000000000000000000000000000000000
80000000000000000000000000000000000000000000000000000
90000000000000000000000000000000000000000000000000000
100000000000000000000000000000000000000000000000000000
110000000000000000000000000000000000000000000000000000
125000000000000000000000000000000000000000000000000000
140000000000000000000000000000000000000000000000000000
160000000000000000000000000000000000000000000000000000
180000000000000000000000000000000000000000000000000000
200000000000000000000000000000000000000000000000000000
220000000000000000000000000000000000000000000000000000
250000000000000000000000000000000000000000000000000000
280000000000000000000000000000000000000000000000000000
320000000000000000000000000000000000000000000000000000
360000000000000000000000000000000000000000000000000000
400000000000000000000000000000000000000000000000000000
450000000000000000000000000000000000000000000000000000
500000000000000000000000000000000000000000000000000000
560000000000000000000000000000000000000000000000000000
630000000000000000000000000000000000000000000000000000
710000000000000000000000000000000000000000000000000000
800000000000000000000000000000000000000000000000000000
900000000000000000000000000000000000000000000000000000
1000000000000000000000000000000000000000000000000000000
1100000000000000000000000000000000000000000000000000000
1250000000000000000000000000000000000000000000000000000
1400000000000000000000000000000000000000000000000000000
1600000000000000000000000000000000000000000000000000000
1800000000000000000000000000000000000000000000000000000
2000000000000000000000000000000000000000000000000000000
2200000000000000000000000000000000000000000000000000000
2500000000000000000000000000000000000000000000000000000
2800000000000000000000000000000000000000000000000000000
3200000000000000000000000000000000000000000000000000000
3600000000000000000000000000000000000000000000000000000
4000000000000000000000000000000000000000000000000000000
4500000000000000000000000000000000000000000000000000000
5000000000000000000000000000000000000000000000000000000
5600000000000000000000000000000000000000000000000000000
6300000000000000000000000000000000000000000000000000000
7100000000000000000000000000000000000000000000000000000
8000000000000000000000000000000000000000000000000000000
9000000000000000000000000000000000000000000000000000000
10000000000000000000000000000000000000000000000000000000
11000000000000000000000000000000000000000000000000000000
12500000000000000000000000000000000000000000000000000000
14000000000000000000000000000000000000000000000000000000
16000000000000000000000000000000000000000000000000000000
18000000000000000000000000000000000000000000000000000000
20000000000000000000000000000000000000000000000000000000
22000000000000000000000000000000000000000000000000000000
25000000000000000000000000000000000000000000000000000000
28000000000000000000000000000000000000000000000000000000
32000000000000000000000000000000000000000000000000000000
36000000000000000000000000000000000000000000000000000000
40000000000000000000000000000000000000000000000000000000
45000000000000000000000000000000000000000000000000000000
50000000000000000000000000000000000000000000000000000000
56000000000000000000000000000000000000000000000000000000
63000000000000000000000000000000000000000000000000000000
71000000000000000000000000000000000000000000000000000000
80000000000000000000000000000000000000000000000000000000
90000000000000000000000000000000000000000000000000000000
100000000000000000000000000000000000000000000000000000000
110000000000000000000000000000000000000000000000000000000
125000000000000000000000000000000000000000000000000000000
140000000000000000000000000000000000000000000000000000000
160000000000000000000000000000000000000000000000000000000
180000000000000000000000000000000000000000000000000000000
200000000000000000000000000000000000000000000000000000000
220000000000000000000000000000000000000000000000000000000
250000000000000000000000000000000000000000000000000000000
280000000000000000000000000000000000000000000000000000000
320000000000000000000000000000000000000000000000000000000
360000000000000000000000000000000000000000000000000000000
400000000000000000000000000000000000000000000000000000000
450000000000000000000000000000000000000000000000000000000
500000000000000000000000000000000000000000000000000000000
560000000000000000000000000000000000000000000000000000000
630000000000000000000000000000000000000000000000000000000
710000000000000000000000000000000000000000000000000000000
800000000000000000000000000000000000000000000000000000000
900000000000000000000000000000000000000000000000000000000
1000000000000000000000000000000000000000000000000000000000
1100000000000000000000000000000000000000000000000000000000
1250000000000000000000000000000000000000000000000000000000
1400000000000000000000000000000000000000000000000000000000
1600000000000000000000000000000000000000000000000000000000
1800000000000000000000000000000000000000000000000000000000
2000000000000000000000000000000000000000000000000000000000
2200000000000000000000000000000000000000000000000000000000
2500000000000000000000000000000000000000000000000000000000
2800000000000000000000000000000000000000000000000000000000
3200000000000000000000000000000000000000000000000000000000
3600000000000000000000000000000000000000000000000000000000
4000000000000000000000000000000000000000000000000000000000
4500000000000000000000000000000000000000000000000000000000
5000000000000000000000000000000000000000000000000000000000
5600000000000000000000000000000000000000000000000000000000
6300000000000000000000000000000000000000000000000000000000
7100000000000000000000000000000000000000000000000000000000
8000000000000000000000000000000000000000000000000000000000
9000000000000000000000000000000000000000000000000000000000
10000000000000000000000000000000000000000000000000000000000
11000000000000000000000000000000000000000000000000000000000
12500000000000000000000000000000000000000000000000000000000
14000000000000000000000000000000000000000000000000000000000
16000000000000000000000000000000000000000000000000000000000
18000000000000000000000000000000000000000000000000000000000
20000000000000000000000000000000000000000000000000000000000
22000000000000000000000000000000000000000000000000000000000
25000000000000000000000000000000000000000000000000000000000
28000000000000000000000000000000000000000000000000000000000
32000000000000000000000000000000000000000000000000000000000
36000000000000000000000000000000000000000000000000000000000
40000000000000000000000000000000000000000000000000000000000
45000000000000000000000000000000000000000000000000000000000
50000000000000000000000000000000000000000000000000000000000
56000000000000000000000000000000000000000000000000000000000
63000000000000000000000000000000000000000000000000000000000
71000000000000000000000000000000000000000000000000000000000
80000000000000000000000000000000000000000000000000000000000
90000000000000000000000000000000000000000000000000000000000
100000000000000000000000000000000000000000000000000000000000
110000000000000000000000000000000000000000000000000000000000
125000000000000000000000000000000000000000000000000000000000
140000000000000000000000000000000000000000000000000000000000
160000000000000000000000000000000000000000000000000000000000
180000000000000000000000000000000000000000000000000000000000
200000000000000000000000000000000000000000000000000000000000
220000000000000000000000000000000000000000000000000000000000
250000000000000000000000000000000000000000000000000000000000
280000000000000000000000000000000000000000000000000000000000
320000000000000000000000000000000000000000000000000000000000
360000000000000000000000000000000000000000000000000000000000
400000000000000000000000000000000000000000000000000000000000
450000000000000000000000000000000000000000000000000000000000
500000000000000000000000000000000000000000000000000000000000
560000000000000000000000000000000000000000000000000000000000
630000000000000000000000000000000000000000000000000000000000
710000000000000000000000000000000000000000000000000000000000
800000000000000000000000000000000000000000000000000000000000
900000000000000000000000000000000000000000000000000000000000
1000000000000000000000000000000000000000000000000000000000000
1100000000000000000000000000000000000000000000000000000000000
1250000000000000000000000000000000000000000000000000000000000
1400000000000000000000000000000000000000000000000000000000000
1600000000000000000000000000000000000000000000000000000000000
1800000000000000000000000000000000000000000000000000000000000
2000000000000000000000000000000000000000000000000000000000000
2200000000000000000000000000000000000000000000000000000000000
2500000000000000000000000000000000000000000000000000000000000
2800000000000000000000000000000000000000000000000000000000000
3200000000000000000000000000000000000000000000000000000000000
3600000000000000000000000000000000000000000000000000000000000
4000000000000000000000000000000000000000000000000000000000000
4500000000000000000000000000000000000000000000000000000000000
5000000000000000000000000000000000000000000000000000000000000
5600000000000000000000000000000000000000000000000000000000000
6300000000000000000000000000000000000000000000000000000000000
7100000000000000000000000000000000000000000000000000000000000
8000000000000000000000000000000000000000000000000000000000000
9000000000000000000000000000000000000000000000000000000000000
10000000000000000000000000000000000000000000000000000000000000
11000000000000000000000000000000000000000000000000000000000000
12500000000000000000000000000000000000000000000000000000000000
14000000000000000000000000000000000000000000000000000000000000
16000000000000000000000000000000000000000000000000000000000000
18000000000000000000000000000000000000000000000000000000000000
20000000000000000000000000000000000000000000000000000000000000
22000000000000000000000000000000000000000000000000000000000000
25000000000000000000000000000000000000000000000000000000000000
28000000000000000000000000000000000000000000000000000000000000
32000000000000000000000000000000000000000000000000000000000000
36000000000000000000000000000000000000000000000000000000000000
40000000000000000000000000000000000000000000000000000000000000
45000000000000000000000000000000000000000000000000000000000000
50000000000000000000000000000000000000000000000000000000000000
56000000000000000000000000000000000000000000000000000000000000
63000000000000000000000000000000000000000000000000000000000000
71000000000000000000000000000000000000000000000000000000000000
80000000000000000000000000000000000000000000000000000000000000
90000000000000000000000000000000000000000000000000000000000000
100000000000000000000000000000000000000000000000000000000000000
110000000000000000000000000000000000000000000000000000000000000
125000000000000000000000000000000000000000000000000000000000000
140000000000000000000000000000000000000000000000000000000000000
160000000000000000000000000000000000000000000000000000000000000
180000000000000000000000000000000000000000000000000000000000000
200000000000000000000000000000000000000000000000000000000000000
220000000000000000000000000000000000000000000000000000000000000
250000000000000000000000000000000000000000000000000000000000000
280000000000000000000000000000000000000000000000000000000000000
320000000000000000000000000000000000000000000000000000000000000
360000000000000000000000000000000000000000000000000000000000000
400000000000000000000000000000000000000000000000000000000000000
450000000000000000000000000000000000000000000000000000000000000
500000000000000000000000000000000000000000000000000000000000000
560000000000000000000000000000000000000000000000000000000000000
630000000000000000000000000000000000000000000000000000000000000
710000000000000000000000000000000000000000000000000000000000000
800000000000000000000000000000000000000000000000000000000000000
900000000000000000000000000000000000000000000000000000000000000
1000000000000000000000000000000000000000000000000000000000000000
1100000000000000000000000000000000000000000000000000000000000000
1250000000000000000000000000000000000000000000000000000000000000
1400000000000000000000000000000000000000000000000000000000000000
1600000000000000000000000000000000000000000000000000000000000000
1800000000000000000000000000000000000000000000000000000000000000
2000000000000000000000000000000000000000000000000000000000000000
2200000000000000000000000000000000000000000000000000000000000000
2500000000000000000000000000000000000000000000000000000000000000
2800000000000000000000000000000000000000000000000000000000000000
3200000000000000000000000000000000000000000000000000000000000000
3600000000000000000000000000000000000000000000000000000000000000
4000000000000000000000000000000000000000000000000000000000000000
4500000000000000000000000000000000000000000000000000000000000000
5000000000000000000000000000000000000000000000000000000000000000
5600000000000000000000000000000000000000000000000000000000000000
6300000000000000000000000000000000000000000000000000000000000000
7100000000000000000000000000000000000000000000000000000000000000
8000000000000000000000000000000000000000000000000000000000000000
9000000000000000000000000000000000000000000000000000000000000000
10000000000000000000000000000000000000000000000000000000000000000
11000000000000000000000000000000000000000000000000000000000000000
12500000000000000000000000000000000000000000000000000000000000000
14000000000000000000000000000000000000000000000000000000000000000
16000000000000000000000000000000000000000000000000000000000000000
18000000000000000000000000000000000000000000000000000000000000000
20000000000000000000000000000000000000000000000000000000000000000
22000000000000000000000000000000000000000000000000000000000000000
25000000000000000000000000000000000000000000000000000000000000000
28000000000000000000000000000000000000000000000000000000000000000
32000000000000000000000000000000000000000000000000000000000000000
36000000000000000000000000000000000000000000000000000000000000000
40000000000000000000000000000000000000000000000000000000000000000
45000000000000000000000000000000000000000000000000000

stone had been carefully laid and the roof solidly built. Of the people who once lived there, so far as known, but one family yet exists, and that one forms part of the settlement now grouped about Red Cliff House. It is said that the settlement was abandoned by its people because of high winds and continuous cold. But on this beautiful sunny night, with scarcely a breath to cool the heated atmosphere, and with the grass so thick and high that it reached to the knees, such a reason seemed laughable.

Among the ruins and mingled with the rubbish and the remains of many former Eskimo feasts were found a large number of implements of the chase, trinkets, fragments of household utensils, and, strangest of all, a domino.

About twenty miles below the Etah settlement is Sonntag Bay, so named from a well known Arctic explorer who was with Hayes. On its shores is the abandoned settlement of the Soofalik Eskimos, about which little has been written, but which, judging from the igloos remaining and the unusually great number of graves, must have been a very large and flourishing community. The *Kite* reached there on the morning of July 28.

Picturesque as was the site of the Etah settlement, it is even surpassed in this respect by that of the Soofaliks. The ground was covered with luxuriant green. Over the sea the purple hills towered more than 2000 feet in bold cliffs and jagged peaks. Through one of the hills behind the settlement a large stream has cut a

path half-way to the bottom, and tumbles the rest of the distance to the ocean in a series of broiling rapids and cataracts, whose roar could be heard a long distance away.

Several hours were spent roaming among the ruins of this old Soofalik settlement, but nothing of importance was discovered. The party then prepared to spend the night on a handsome glacier, which empties into the water at the head of Sonntag Bay. Sailors' bags were packed with blankets and other articles, a toboggan loaded with them, and a start made. This glacier seemed to have special advantages for the proposed journey by its very gentle slope, probably not exceeding more than from three to five degrees, and by its unusual compactness, its crevasses appearing merely as closed up slits. The bags and other traps were transported without difficulty over one of the lateral moraines and placed on the toboggan immediately above the edge of the ice wall, which rises to the height of from eighty to 100 feet above the sea level. The trip was begun at 11.45 p. m., and was pushed to the summit without any halts except momentary ones, and the top reached in exactly five hours.

For the first two or three miles the surface of the glacier was quite even, and composed sometimes of ice and sometimes of crisp frozen snow, which the early morning sun had not yet converted into slush. At a height of 1300 feet hummocky undulations broke the surface into areas difficult to traverse. These

succeeded one another to the summit and the toboggan was pushed forward only with great exertion, owing to the steep slope of the hummocks and the slippery ice of the frozen surface. A short distance from the apex of the glacier deep crevasses began to appear, but in most cases they were easily crossed by using the toboggan as a bridge. The source of the glacier was reached at an elevation of 2055 feet, where it terminated in a most beautiful cirque or névé basin, from whence the huge ice mass discharges. At this point began the interminable ice-cap rolling higher and higher away into the interior.

The descent, while in a measure easier through the relief of the strain, was yet arduous in many ways. This was made particularly so through the tendency of the toboggan to rush, and the necessity consequently of holding it in tow from the rear by means of guide lines. It required four hours to reach the boat, and the party, though most of them were utterly worn out, were yet proud of the feat, for they had demonstrated by this ascent the important fact that the inland ice of the north can be reached by the backs of the glaciers by man carrying the impedimenta of travel ; the toboggan and load used in the experiment weighing, approximately, 200 pounds.

Soon after the return of the party, the *Kite* resumed her voyage southward and early the same afternoon arrived at Robertson Bay, a remarkably handsome body of water immediately adjoining McCormick Bay, and running parallel with it. Here also were several

settlements, called respectively Igloo Duhomey, Kukan, Deasunna and Ikenomey. To the first named place the professor, Mr. Meehan and Mr. Murphy, the first mate, made a visit. They found six huts, all but two of which, however, were in ruins. On entering one of these the three were amazed to find traces of recent occupation. Furs were piled high upon the stone platform in the rear. The rack for wet "cammiks" and other articles hung from the roof; a drinking cup and blubber pan and some other utensils were in their proper places. Outside, in the immediate vicinity, evidences of recent occupation were even more apparent in numerous caches of seal, and in several drying houses of stone filled with the bodies of little auks.

While they were standing about wondering, for the place was supposed to be deserted, lo and behold! a "mickey," or Eskimo dog, showed himself with vociferous barking over a little hill not far away. Immediately behind him trudged an ancient huskie, attired in the picturesque but filthy garments of his race, with his "cunna" (woman or squaw) and three pickaninnies bringing up the rear. With unembarrassed mien and smiling countenance this now most northern settler on the face of the globe approached the three white men, uttering the familiar "Ki-mo" in a sing-song and stuttering voice. Indeed, the man stuttered at such a rate that Daniel, who met him subsequently, remarked: "Me no savvey, huskie; speakem too much tch, tch, tch; his cunna plenty speakem good, me savvey."

The professor took the family on board the vessel and gave them wood, iron and other useful articles. Words cannot express the delight with which these poor, isolated beings received the gifts. They howled, they danced and they sang, and quoting Daniel again, "They much cry," and their noses bled profusely from the excitement. Meanwhile Mr. Meehan had been left on shore to make further exploration of the place. From many signs it is evident that Igloo Duhomey is one of the most ancient of the settlements the party had visited. One of the most marked proofs of this was the great number of graves on the brow of a little hill a short distance away. Most of these graves had fallen in and the bones of the dead had been resolved into dust. In noting these graves the difference between the method of disposing of the dead in North Greenland and that pursued by the Eskimos of the South was made strikingly apparent. In North Greenland when a native dies two walls of stone are built, running parallel and about two feet and a half apart and two feet high, and between them a thick layer of sand is placed, on which the body, wrapped in furs, is deposited. Over this vault, if it may be so called, is laid a large flat stone and both ends are firmly sealed by rolling large boulders against them; over all, stones are heaped until quite a large mound is made, to secure the body against the predatory visits of any animal likely to come near the spot.

When at length the Eskimos had received their gifts, been fed and landed and all hands were once more on

board, the *Kite* steamed away and two hours later was anchored in front of Red Cliff House, where it was learned that in consequence of the poor physical health of Matthew Henson, the colored servant, Mrs. Peary had thought best to break camp at the head of McCormick Bay and return to the winter quarters.

CHAPTER X.

CAMPING ON ROBERTSON BAY.—THE ANGEKOK.—THE FUGITIVE WIFE AND DAUGHTER.—A FOSSIL GLACIER.

THE recollection of the walrus hunting in Smith Sound was so pleasant, that the day after the return of the *Kite* to McCormick Bay leave was obtained by the greater number of the party to go on a three days' hunt for reindeer and Arctic hares. As the distance was nearly fifteen miles the *Kite* took the party to the site of the proposed camp and left them, they proposing to row back to McCormick Bay at the expiration of their leave. The party comprised Messrs. Bryant, Entrikin, Mills, Meehan and Daniel, the interpreter, and these pitched their tent on a grassy field near the beach, beside a clear cold stream of water. Behind them was a large valley, once occupied by a huge glacier, but which through climatic changes had been driven back little by little, until now nothing remained of it but a small body of ice extending not more than a quarter of a mile from the inland ice-cap. The various periods of the retreat of the glacier were plainly marked by huge terminal moraines extending clear across the valley.

To the east of the camp beyond the stream rose a lofty mountain peak, the greater part of which was covered by a thick growth of vivid green moss, with

intervals of large beds of loose stones. These beds of stones are a favorite resort for the little auk, a toothsome bird about the size of a robin, which congregate on all the bays, fiords and mountain sides of Greenland by the hundreds of million. Two of the party therefore took their guns and essayed to clamber up the steep slope of the mountain over the green moss to shoot a number for supper.

They had climbed perhaps five or six hundred feet up, when the moss suddenly gave way beneath their feet, and they slid downward for some distance with dizzying rapidity. When at length they could stop themselves they found that beneath the luxuriant green was a solid mass of hard colorless ice, and further search revealed the fact that there was ice everywhere beneath this cryptogamous growth—in short, they had come upon a natural icehouse, known among geologists as a fossil glacier. This apparently curious freak of nature is the result of the most natural and simple causes imaginable. Thousands of years ago, perhaps, when the climate of Greenland was much colder, this mountain was covered by a vast ice sheet of great depth. Little by little the climate changed and became warmer, and mosses, which before could only grow on its edges in the more protected nooks, pushed gradually forward over the chilly ice until they completely covered the mass.

These Greenland mosses are quite different from the poor things we in our climate know by that name. The growth covering this ice-mountain was in places three

or four feet in thickness, and, but for an accident, the party might have rolled in it, trudged over it and camped on it for weeks without dreaming what was underneath.

In the three days' hunting trip on the shores of Robertson Bay the party found a huskie there named Kioöpedo, an "angekok" or medicine man from Red Cliff House, living in the hut with Kiuna, the settler of Igloo Duhomey. His purpose at Robertson Bay was to find his wife and stepdaughter, who had run away from him more than a week before, and here he was calmly waiting until they should turn up, as he expected they would, at Igloo Duhomey. The Eskimo "angekok" is a peculiar personage. Any man or woman who can sing may lay claim to the title, and if he or she has a sufficient store of animal magnetism, can wield a powerful influence over the tribe with which he or she resides.

Kioöpedo was a character. Larger than most of the other huskies about him, he was at the same time of pleasing appearance and kept himself a trifle cleaner. His disposition, however, while his face wore a continuous smile, was said to be anything but pleasant, and he was feared and hated. Notwithstanding, what he said or commanded had great weight. The wife who had run away from him was his third spouse and it was whispered that he had killed the two previous ones in fits of anger, and the one who ran away, before she did so, confided to one of her sex that she feared a similar fate if she remained. While we were in camp at Igloo Duhomey she and her daughter did not put in an appearance, but

they did as we heard subsequently, more than a week later, to find their husband and stepfather quietly sitting before Kiuna's igloo. The journey of the woman and her daughter from the Red Cliff House to Duhomey had been one of almost unparalleled privation. When they departed they took with them no food. By sharp walking they reached the head of McCormick Bay in a few hours; here they made the ascent of the plateau above the bay, where they gathered and ate a few huckleberries. This was all the food they had for more than ten days and the greater portion of that period was spent in wandering over the edge of the ice-cap, and in crossing three wide and dangerous glaciers. When they arrived at the settlement on Robertson Bay they were nearly dead, and their appearance, it is said, was so pitiful that even the cruel heart of Kioöpedo was moved and he promised to treat his wife more kindly in the future.

In the many expeditions of the party the Eskimos were found most useful; good-natured, willing to work and ever ready to accompany them and give all the assistance in their power. In the hunt they were found to be invaluable, their extraordinary keenness of vision enabling them to see deer and other animals long before the untrained eyes of the white people could do so. Kiuna, who assisted in our hunt at Igloo Duhomey, was considered only an indifferent artificer and, until recently, a poor hunter, but since then he has come to be looked upon with much respect. His new reputation for prowess dates from last winter, when, just before a

terrific blizzard, he took his family from one bay to the other on a hunt, and nothing was heard of him until spring, when he turned up, with a record of having killed six walrus single-handed.

His safe return was the more wonderful to the superstitious natives, since during the blizzard shortly after

STALKING FOR WALRUS.

his departure, they had heard the "Korkoya" howl. The "Korkoya" is a powerful and malevolent spirit who is believed by the huskies to inhabit the extreme northern waters and the inland ice. It is his peculiarity to howl after a meal. He is particularly fond of a morsel of human flesh, next to which he loves a ship or a kajak as an article of diet, and his howling on the occasion

referred to, appeared an infallible indication that Kiuna had met with a horrible death and had been devoured by the fiend of the ice-cap. His incredible escape from the combined terrors of the blizzard, the ice-cap and its monstrous spirit, the proof of his prowess in the slain walruses, and his singing qualities, raised him at once to high dignity and gave him the name of being an angekok.

The day succeeding the return of the hunting party, which was on the night of August 2, the *Kite*, with Mrs. Peary on board, was taken to the head of McCormick Bay to await the return of Lieut. Peary, which was now expected at any moment.

CHAPTER XI.

THE RELIEF EXPEDITION MAKES A RECONNOISSANCE OF THE INLAND ICE AND MEETS LIEUT. PEARY AND MR. ASTRUP.

ON the afternoon of August 5, Professor Heilprin directed every member of his party to prepare for a reconnoissance of the inland ice. A number of poles were prepared for the purpose of planting them for the guidance of Lieut. Peary and Mr. Astrup to McCormick Bay. The setting of these poles was considered advisable because, should the two travelers in their returning march deviate in the slightest degree to the southward or the northward, they would certainly land at the head of Robertson Bay or Inglefield Gulf. The coming out from the inland ice at either of these points would be unfortunate, as from them to the Red Cliff House the way is not only many miles, but also excessively difficult.

The work of getting ready for the reconnoissance was soon done, and the party started. Landing on the south side of the bay, near its head, they clambered up the steep rocky beach to the entrance of a large valley which extends nearly to Inglefield Gulf. Here they came upon the remains of Camp Tuctu, where the companions of Lieut. Peary had made their headquarters early in the season when preparing to take the supplies to the summit of the ice-cap for the great inland journey.

On the east side of the valley the party found a gorge extending from its bottom to a deep depression about two-thirds the way up the mountain which formed its north side. Up this gorge, which was also the path taken by Lieut. Peary and Mr. Astrup when they set out on their daring exploration, the relief expedition climbed and stumbled. Through it ran a stream of clear cold water which bounded from rock to rock on its way to the sea. Reaching the depression in the mountain they found it to be a deep and picturesque valley which had been dug out of the great table-land by the work of a long extinct and mighty glacier. Evidences of its tremendous work appeared on every hand — huge boulders with rounded edges, and large, flat rocks deeply scarred and riven. To the very edge of this valley the ice-cap came, completely burying the land except four "nunataks" which rose grim and sturdy above its reach. To the side of one of these "nunataks" the party ascended, and presently found themselves on the inland ice. The rolling white landscape, extending in every direction in dreadful monotony, fully justifies the terror it inspires in the minds of the Eskimos.

For a mile or two the journey was through névé or granular ice, into which at every step the feet sank ankle-deep. When at length the ice-cap proper was reached traveling was, if anything, worse, for through the action of the warm sun its covering of snow was scarcely firm enough to bear the weight of a man. As by some oversight snow-shoes had been left behind,

progress was very slow and laborious; but, although with every step the members of the expedition sank knee, and often waist, deep, by nine o'clock that night they had penetrated inland several miles and to an elevation of 3300 feet above the sea. At the point now

PLANTING A GUIDE POST ON THE ICE-CAP.

reached the first of the poles was planted, and to it was nailed a board bearing an index and the inscription :

"TO McCORMICK BAY.
KITE IN PORT, AUGUST 5."

The work of setting this pole completed, it was determined to place another on an eminence about two miles beyond.

The toilsome march towards this point was scarcely begun when far away in the distance a small dark speck appeared almost in line of vision with the very site for which the relief party was making. What could it be? Could it be a bear? No, this continental waste of ice is shunned by all forms of living matter and neither native man or brute will venture upon it—and yet the thing had life—it moved—"Great Heaven! it is waving something in the air!"

It was a man, no doubt of that now—and if so, it must be a white man. No Eskimo was ever known who would not refuse absolutely to penetrate any distance into the ice-cap. Who then could it be other than the man we were seeking? Three objects were now plainly seen. It must be—it could be no other than Lieut. Peary, Mr. Astrup and their sledge with its team of dogs.

When the almost incredible truth flashed on their minds, the whole party broke out into wild cheers, and when, a moment later, the report of a rifle shot came to them faintly across the ice, they could scarcely contain themselves for joy. Then one of the objects detached itself from the others and started ahead, disappearing behind a low ridge which intervened, to reappear shortly on the summit revealed as Lieut. Peary. The tall form of the returning explorer, clad in heavy fur garments, bareheaded, walking with a free stride on his snow shoes, carrying a wind gauge in one hand and a carbine in the other, paused for a moment on the crest of the hillock, and stood there refracted to

a gigantic stature darkly silhouetted against the clear sky. Lieut. Peary was followed closely by Astrup driving five yelping Eskimo dogs attached to a heavily laden sledge. It was an awe-inspiring sight, these two men coming out of the great mysterious North, over that frozen terror, whose snows had never been trodden by human foot, alive from that fearful solitude on whose broad expanse life had never before drawn breath.

Such was the feeling inspired that the cheering died away, and the silence which followed was oppressive, until Lieut. Peary, coming close, himself broke the spell by exclaiming, "Well, well, this is Professor Heilprin. I am glad yours is the first hand I take. So this is the relief party. Well, gentlemen, nothing could have given me greater pleasure." Then after shaking each heartily by the hand, he continued, "I have traveled 1300 miles and made a record, and neither of us has had an ache or pain since we left the Red Cliff House." The appearance of the men fully bore out his words, they were evidently strong, healthy and not the least travel-worn.

A moment later, Mr. Astrup had come along, gliding easily over the frozen snow on his Norwegian skis. Turning to Mr. Astrup, Lieut. Peary said: "Yes, we are well and happy, and I am glad to say that this brave boy has behaved nobly and I could always rely upon him." All shook Mr. Astrup by the hand, who responded with a modest smile to the praises of Lieut. Peary, and in his broken English assured each of

THE MEETING WITH LIEUT. PEARY ON THE INLAND ICE.

the party as they were introduced to him: "It gives me much pleasure."

When the greetings were over one of the party asked Lieut. Peary whether he was hungry, and produced a sandwich, but that gentleman smiled and said he might perhaps be able to offer the interlocutor and all of the party a larger meal than they could provide in return, and pulling a piece of pemmican from his sledge he tendered it to them. Although Lieut. Peary declined the sandwich, Mr. Astrup was more accommodating, and devoured it with manifest relish, declaring it to be the best thing he had eaten for ninety days, far superior to pemmican or pea soup.

The two parties then made their way slowly towards McCormick Bay, Lieut. Peary keeping up an almost continuous fire of questions as to what had occurred in the outside world during his absence. By four o'clock the edge of the ice-cap was reached, and an hour later a portion of the relief party were rowing Lieut. Peary and Mr. Astrup shipward.

Before they came fairly within hailing distance of the *Kite* the enthusiasm of those escorting the returned explorers could be contained no longer. Wild shouts and yells broke from their throats. They cheered Lieut. Peary, Mr. Astrup, Mrs. Peary and the Peary Expedition, and everything they could think of. As the boat approached nearer to the *Kite*, the yells and shouts and cheering grew wilder, and then Lieut. Peary himself became excited and standing in the stern of the boat he

discharged his carbine repeatedly; and even Mr. Astrup, quiet and retiring as he usually is, was carried away by the general feeling of exhilaration and joined in the hubbub.

By this time the racket in the boat had attracted attention on the *Kite*, and Captain Pike, with the officers and crew, rushed to the ship's side, and seeing whom the relief party were bringing, began a series of hurrahs which lasted until the boat touched the ship's side, when Lieut. Peary, climbing nimbly to the deck, made a bound to the companion-way and disappeared below to assure his anxious wife of his safe return.

CHAPTER XII.

THE PEARY PARTY'S WINTER LIFE.—LAYING IN STORES.—THE ARCTIC NIGHT.—PREPARATIONS FOR THE INLAND JOURNEY.—THE START.

IMMEDIATELY after the *Kite* left McCormick Bay on July 30, 1891, work was begun on Red Cliff House. Fortunately all of the joists and much of the other lumber had been cut on the way out, so that in a very few days the roof was on, and Lieut. Peary could be removed under a cover to a couch prepared for him on a pile of boxes in one corner. None too soon, however, for a terrific rain storm shortly set in which raged without intermission for ten days, completely flooding the surrounding ground, and at one time even threatening the house with destruction. At length the little structure having been completed and the storm over, Lieut. Peary directed Messrs. Gibson, Verhoeff, Astrup and Dr. Cook to take the *Faith*, one of the whale boats, to Northumberland and Hakluyt Islands on a hunting expedition for game to be cached as a winter supply. Mr. Gibson was also commissioned to visit the Nehelumie settlement, and to induce one of the Eskimo hunters of that tribe to come with him to McCormick Bay, it being supposed that in the chase for walrus and seal the aid of an experienced native hunter would prove invaluable. The

boat party returned, having succeeded in carrying out their instructions to the letter. They brought with them Equa, mentioned in a previous chapter, one of the brightest of the so-called "Arctic Highlanders," who brought with him his "cunna" and "an imp of darkness," their little daughter. Equa took up his abode near Red Cliff House and proved an expert in the hunt for the animals native to those shores, besides being a cheerful, companionable fellow. The various hunting parties before winter set in bagged no less than thirty-one reindeer, birds unnumbered, besides which a goodly supply of walrus and seal meat was laid by.

On the return of the boat party, the barrels and boxes containing the supplies, the boxes with the lids broken off and their open end turned inward, were piled around the house, at a distance of about four feet from its outer walls, leaving a passageway, by means whereof access could be gained to the provisions as they were required without any one being obliged to face the severe winter weather. This arrangement proved most convenient. Around this barrier of food was piled an outer wall of stone and turf and all made snug for the fierce blasts of the Arctic night.

Several preliminary explorations also were made with a view to finding the most practicable route to and over the ice-cap. On September 7, Mr. Astrup, Mr. Gibson and Mr. Verhoeff made an attack on the inland ice in the direction toward the basin of the Humboldt Glacier. They had scarcely begun the journey, however, when

fierce storms and heavy snows began to rage, which compelled them to return to the Red Cliff House, completely baffled. They got back on September 12, and on the twenty-second Mr. Astrup and Mr. Gibson made another attempt. This time, although they encountered no very bad weather, the condition of the snow on the inland ice was found such that any great progress was impossible. They returned to headquarters seven days after starting. In this journey the two managed, notwithstanding the difficulty of the traveling, to penetrate the interior a distance of more than thirty miles.

Meanwhile, Lieut. Peary's broken leg had improved so rapidly that on September 27 he was able to throw away his crutches. On the return of the party consisting of Astrup and Gibson from the last mentioned journey, an exploration of Inglefield Gulf was begun, but before this had advanced very far the party were driven back by the young ice which began rapidly to form on the water. By the first of October the bays and inlets were all frozen solid, putting a stop to all further boat life.

The days had been growing shorter and shorter till at length the sun just showed above the horizon for a few brief moments daily, and at last, by November 8, the long Arctic night had set in. From that time until February 15 it lasted before day again dawned, and during these three months it was as dark as midnight. The time passed rapidly, nevertheless. There were many things to be done. Fur skins were made up into

garments, and wood fashioned into sledges for Lieut. Peary's journey in the spring.

The companionship of the natives aided materially in relieving the tedium of the winter. Many from the Nehelumie settlement came to Red Cliff House; in fact, their visits were almost constant. They would bring their be-

DR. COOK. HENSON. VERHOEFF. HEILPRIN. MRS. PEARY. LIEUT. PEARY. ASTRUP.

LIEUT. PEARY AND NORTH GREENLAND PARTY.

longings with them on their sleds, and a number of families remained and built their winter igloos there, so that before long there was quite a village of them in the neighborhood. Prominent among these were the families of Kolotengua, Onolka, and Koko, and the "angekok" Kioöpedo, whose matrimonial infelicities are elsewhere narrated. All of them became staunch and useful friends.

NORTHERN ESKIMOS—WOMEN AND CHILDREN.

They soon developed a fondness for the white man's food, especially coffee and biscuit, and were regularly treated to these delicacies. The party, too, applied themselves diligently to learning the Eskimos' language, and with such success that before the winter was half over most of them were able to converse fluently in that tongue.

Mr. Verhoeff had strong inclinations towards meteorology, therefore the observation of all meteorological phenomena was entrusted to him, and he became so deeply interested in it that when Lieut. Peary went away on his journey over the inland ice, Mr. Verhoeff showed no anxiety to accompany him, but remained to continue his favorite pursuit.

For exercise, while the night lasted, at least once every twenty-four hours, all the male members of the party traveled out to a large iceberg about a mile from shore in Melville Bay and cut ice for drinking purposes. They also took short daily walks in which Mrs. Peary almost invariably took part.

Feasts were numerous. The birthdays of each member of the party was the occasion of one, and on New Year's day Mrs. Peary gave a reception which was graced with the presence of the whole Eskimo tribe, man, woman and child.

Although the weather was very cold, the thermometer falling on one occasion as low as fifty-three degress below zero, the entire party was quite comfortable, and did not burn within one ton of the seven tons of coal which had

been left behind for their use. Neither did they consume their allowance of kerosene.

On February 14 Lieut. Peary, Mr. Astrup and Dr. Cook went to see the first sunrise, which would occur on the fifteenth, the next day. They had scarcely reached the summit of the bluffs behind the Red Cliff House when a furious tempest of wind and rain arose on the coast, and of rain and snow on the ice-cap. For forty-eight hours the storm raged violently, and almost blew down the house. The party was buried deep under the drifts and was only with difficulty extricated.

Soon after was begun the work of carrying provisions for the great journey to the head of McCormick Bay. Camp Tuctu was established as a depot, and every day or two quantities of food were hauled thither. In the meantime, Lieut. Peary, with Mrs. Peary and a native driver, went in a sledge drawn by thirteen dogs to Inglefield Gulf and resumed the exploration of that body of water. It will probably be remembered that Lieut. Peary had been disappointed in his expectation of securing dogs on the way up on the *Kite*, at Disko and other points called at. He was more fortunate in the North, and acquired a magnificent pack of that only half-tamed breed of bear-dogs used by the natives both in the hunt and as draught animals.

During this journey the party slept without shelter except on one occasion, when a heavy storm blew up and Lieut. and Mrs. Peary were compelled to take refuge in an igloo and house with the natives who

owned it. In the exploration of Inglefield Gulf, covering a circuit of more than 250 miles, many enormous glaciers were discovered, which Lieut. Peary named respectively Leidy, Heilprin, Tracy, Farquhar, Melville, Meehan, Sun, Brinton, Hart, Hubbard, Sharp and Dahlgren. Besides these were discovered by him Mounts Daly, Adams and Putnam, and the magnificent line of naturally sculptured cliffs, which for their fancied resemblance to the ruins of the Egyptian temple on the Nile, he named Karnak. The two explorers remained away a week.

Immediately on their return the final preparations were made for the inland ice journey. On the last day of April, the work of transporting the provisions and other supplies from Camp Tuctu to the ice-cap was begun, engaging all of the male members of the party, and all the male Eskimos of the settlement lending a hand. Little by little they were taken over the steep and broken ascent which intervened between the camp and the edge of the ice, the nature of the ground necessitating the toilful carrying of the whole outfit on their backs.

At last, three days later, on May 3, 1892, came the time to start. It was eight o'clock in the morning when Henson was sent to the ice-foot with the large dog-sled. The eight days' rest which the animals had enjoyed

since the return from the exploration around Inglefield Gulf had put them in high spirits, and it was all that Henson could do, experienced whip as he had become, to keep in order the fighting and snarling pack of semi-wolves. Lieut. Peary followed in the track of the sled, accompanied for some distance by Mrs. Peary.

On their way they met Verhoeff, who shook hands heartily, and bade good-by with many good wishes for a successful return and the fulfilment of the brightest hopes entertained of the outcome of the journey. On looking around, however, for the natives in order to bid them farewell, not a sign of them was to be seen. All had disappeared within their huts. To their superstitious minds the white chieftain was rushing to certain destruction. He was surely going to be devoured by the horrid Spirit of the Ice, the awful Korkoya, and they were hiding in order that they and their kindred might not be included in the fate certain to overtake all who participated in the sacrilege of invading his forbidden domain.

The crack of Henson's whip was heard in the distance, and then as he disappeared beyond a small rocky eminence all was silence. Lieut. Peary and his wife were alone; the moment for the parting, which might be forever, had come.

Looking back, Lieut. Peary saw once more the muffled fur-clad figure with the faithful Newfoundland, "Frank," beside her—then a turn in the shore shut out the sight; the inland journey had begun.

At three o'clock on the following morning Lieut. Peary, carrying the light inland-ice-sled, and Henson, with the dogs and the large sled, arrived at the starting point, after a weary climb over the rugged and stony ground of the gorge at the head of McCormick Bay. Here they found Astrup, Gibson and Dr. Cook fast asleep in their bags. After a short rest, the sledges and numerous baggage of the exploring party were

INTERIOR OF AN IGLOO.

gotten over the edge of the inland ice; the work involving the most strenuous efforts on the part of the men and the dogs combined. The sky presaged a storm. This, however, was taken by the leader of the party as a good omen. Twice before, when he had made successful incursions on the ice field, his setting out had been accompanied by threatening weather, seemingly the promise of a particularly hard time. On each occasion, however, the prognostication proved false.

The final preparations, the packing of the sledges, was the work of no less than two days; but at length all was ready, and the dogs, which now numbered twenty in all, were harnessed, and the party got under way; a long, straggling procession, sliding on skis or striding over the yielding white surface on their snow-shoes; Lieut. Peary in the van and marking the course, followed closely by Gibson and his team, Dr. Cook with another, and Astrup bringing up the rear, with the big dog-sled and a smaller sled in tow. Henson's heel (which had been frozen during the preceding winter) became so painful after about a mile of the inland ice had been traversed, and he suffered so intensely with it, that it was thought best not to let him continue further, and he was accordingly sent back. The wild wolves, miscalled dogs, which made up the teams were found to be an exceedingly difficult lot to manage. Scarcely an hour passed when one or the other had not succeeded in twisting his harness into knots or did not get into a bloody wrangle with some one or other of his companions. At the rests of the party, it frequently happened that the whole pack would break away, and then ensued a time of chasing and recapturing the wild animals, in which their captors were often, and sometimes severely, bitten.

Very little progress was made on May 8, the second day after the start, owing to the violent gale which blew from the interior driving the frozen particles of the surface ice into the faces of the advancing column.

To shield themselves against the blizzard, igloos were constructed of snow, into which the party crept to wait until the storm should have abated its severity. After twenty-four hours of this confinement the cold became unbearable, and notwithstanding the stinging impact of the icy particles, Lieut. Peary and Gibson, who had shared one of the igloos, started out and at last

CATCHING FISH THROUGH THE ICE.

felt a glow of warmth induced to their bodies by the exertion.

Looking for Dr. Cook and Astrup, who were encamped further on, they found them almost completely buried out of sight. The upstanders of their sleds, five feet or more high, were just barely visible above the drift. For hours the explorers worked at extricating the sledges. It was found that Dr. Cook and Astrup had been unable to get out of their igloo

because of the frightful drift and wind. After the sleds had been dug out the dogs had to be corraled. The brutes had broken away and had chewed up their harness, besides devouring every particle of food which was accessible, and their recapture was a task of no little difficulty and required patience as well as dexterity. It was usually done by alluring them with food, rapidly seizing them and burying their heads in the snow. When done skilfully enough one might expect to escape with the infliction of only two or three bites. Some of them, however, before they were subdued, had to be lassoed and almost choked to death.

The experiences with igloos had proved so disagreeable, they were found so cold and occupied so much time in building, that on the later marches they were entirely dispensed with.

CHAPTER XIII.

THE JOURNEY OVER THE INLAND ICE.—IMPORTANT GEOGRAPHICAL DISCOVERIES.—GREENLAND AN ISLAND.—INDEPENDENCE BAY.—THE RETURN.

UNDER these and similar discouragements, at last, on May 14, the true inland ice was reached, and not until the next day, May 15, did the party make their first march over its gradual and easy incline. In the interim, four of the dogs had succumbed to a disease peculiar to their breed. Four of the eight sledges with which the party had set out had also been abandoned as unserviceable.

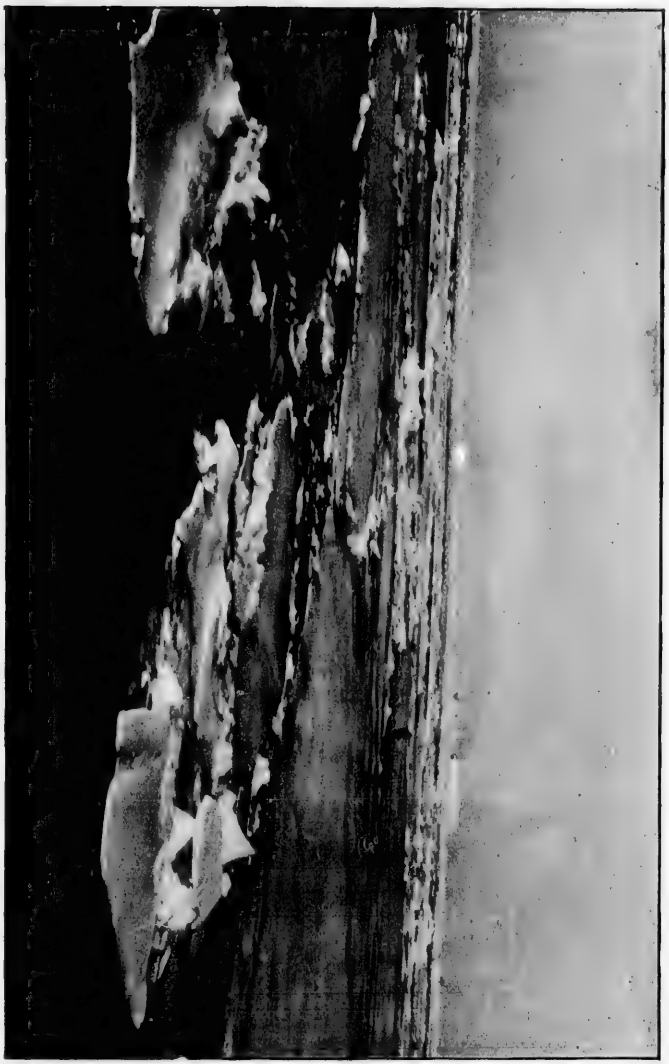
A contrivance invented by Lieut. Peary may here be mentioned. It consisted of a light wheel about three feet in diameter, with a hollow hub, in which was placed an odometre, a simple device of clock-work. This was attached to the rear of one of the sledges, and by its means not only was it possible to keep an accurate record of the number of miles traveled, but this record was found a very useful aid and supplement to the results obtained by sextant, chronometer and compass in the reckonings for position.

By the twenty-first of May the party found itself 130 miles from Red Cliff House on the edge of the basin of the great Humboldt Glacier. Here a halt was made

and a discussion had as to the composition of the party which was to advance further northward. Lieut. Peary submitted to his companions that now they had had a fair foretaste of what would have to be endured, and that they were probably aware of the fact that the proposed journey was not to be a holiday jaunt; that he had determined on taking with him only a single companion, and he called upon one of them to volunteer for this position. All, Dr. Cook first, followed by Astrup and Gibson, responded with alacrity, each expressing his eagerness to proceed, so that it devolved upon Lieut. Peary to decide between the three. He chose Astrup, and selected thirteen of the dogs and three of the sledges for his own use. The others were sent back with Mr. Gibson and Dr. Cook. Gibson was given command of the returning party, and Dr. Cook was deputized to take charge of the settlement at Red Cliff House until his chief should return.

The next morning, after the loads had been readjusted and the lashing of the sledges looked after, Dr. Cook and Gibson, supplied with ample rations, and provided with one of the lighter sledges dragged by a team of two dogs, bade their companions farewell and set out on their return to McCormick Bay. Their return trip was without incident and comparatively pleasant, and it was made with much greater ease than the outward journey. They arrived at Red Cliff House on July 3.

After they had departed Lieut. Peary laid his course northeast true, hoping thereby, if the maps of the region



ICE FLOES, INGLEFIELD GULF.

were to be trusted, to escape the basin of Petermann Fiord as well as of St. George's Fiord beyond. The order of march which was now adopted was kept up throughout the journey. In advance strode Lieut. Peary, every faculty strained to keep his direction, Astrup, in charge of the dogs and the sledges, bringing up the rear. The dogs soon became accustomed to follow the leader, and with an occasional urging and encouragement from Astrup, their driver, in due time became quite manageable and buckled down to the arduous work expected of them with a right good will. Owing to the nature of that limitless white wilderness, barren of all landmarks, the task of keeping a direction was most exhausting; mere description will give no idea of its fatigue. In every direction, as far as the eye can reach, is an unbroken, white expanse, without relief, without landmark of any kind; in fact, as bare of such as the trackless ocean. An hour's progress at a time, with constant reckonings and references to compass, charts and other means of determining position, was all that was possible, and the wear was so great as to make it at times unendurable.

In his belief, however, that by the course taken he would clear the Petermann Basin, Lieut. Peary was mistaken. At the end of seven days' march a detour of some ten miles became necessary in order to avoid the inequalities and crevasses which began to mark the inland ice. This is a feature common to all points where there is an opening towards the sea; these openings

favoring the detachment of portions from the central mass and the formation of glaciers.

It was on the last day of May that the basin of Petermann Fiord was reached. The weather was pleasant and clear; the thermometer registered 77° in the sun at midday. The explorers went into camp and remained there for thirty-six hours, availing themselves of the opportunity offered by the clear day to thoroughly dry their clothes; and Lieut. Peary even felt moved to enjoy the luxury of a snow bath. From Petermann Fiord onward the surface was found to be almost level, so that the higher peaks which marked the fiord remained in sight a distance of nearly forty miles. But soon after this the ground began to ascend.

This was a surprise to Lieut. Peary, for, according to the charts, the next great indentation, that of Sherard Osborn Fiord should be much further to the northeast than this rise indicated. Supposing, however, that it was quite possible that the basin of that fiord might extend much further inland and southward than it was heretofore believed, he continued on. On the eighth day of June its supposed depression was in sight. In order to escape the expected inequalities of the surface it was decided to deflect the course to the eastward. As the experience of the next fortnight demonstrated, it would have been well if this resolution had been taken sooner, for the travelers soon found that they had walked right into the southern edge of a great glacial depression, and were among the crevasses and short slippery hillocks of ice which form

their inevitable accompaniment. On the opposite side of the glacial basin rose steep cliffs and icy slopes, which it was impossible to scale with their heavily-laden sledges.

The weather had become very threatening; angry black clouds were gathering, and scarcely had the adventurers gone into camp for the day when the storm broke loose with great violence. For two days they were fast prisoners in their little shelter, consisting of an excavation made into the snow and further protected

ESKIMOS' FOX-TRAP.

as well as might be by banking their sledges and spreading a tarpaulin and a small sail to the windward. When the storm had abated and, after observing the lay of the land, it was found that there was nothing to do but to turn to the south and reach the more practicable surface of the heights of the interior ice-cap. Two entire days of most difficult and arduous climbing were required, many miles of the hard-earned northerly advance had to be retraced, and an elevation of more than 6000 feet

above sea level reached, before its unobstructed, even convexity was again under foot. To the eastward was still seen the depression which marked the fiord.

After turning the same the march was continued a short distance to the north and northeast, when the ground again showed signs of unevenness and began to be traversed by yawning crevasses. To add to the difficulties they were now beset by bewildering fogs, throwing everything, snow, air and sky, into a uniform hazy white light, making it impossible to distinguish one from the other, the effect being much the same as though one were enveloped in complete nothingness; there was no outline; all was one formless void. Under these circumstances there was nothing to do but to await more favorable conditions.

In the excessively hard work of the days just described, Nalegaksuk, the best of the whole dog team, had sprained his foot and soon showed signs of the dog disease, and had to be killed. The large sledge, too, had suffered from the strain, and a whole day was spent in relashing and making other repairs. The intervals were filled up by readjusting the loads and throwing away such things as experience had proven could be spared.

It was now discovered that the basin which had been supposed to be the Sherard Osborn Fiord was in reality that of St. George, which extends much further inland than was heretofore believed. The crevasses last encountered, however, belonged to the glacier basin of Sherard Osborn.

Deflecting again towards the ice-cap, this last depression was at last successfully flanked. The course was again northeastward. The weather was clear, the sun shone brightly, but travel now was impeded by a new difficulty; the snow became soft and sticky, and the heat so oppressive that the voyagers were constrained to throw off all of their outer clothing. The rising ground, too, indicated that they were ascending the divide between Sherard Osborn and of another indentation of the shore further to the northeast. These combined discomforts affected the spirits of both the travelers. Even Astrup, always bright and cheerful, was depressed, his merry singing which had accompanied the previous days of smooth, easy gliding, had ceased, and with lips compressed and in grim silence he was aiding his tugging team by pushing the heavy sledges up the steep inclines.

By the twenty-sixth of June the eighty-second parallel was reached. The coast-land, which during the days immediately preceding had, from time to time, been sighted, and up to this point was invariably seen toward the northwest, here suddenly confronted the travelers on the northeast, trending first east, and finally southeast. Supposing he had reached Victoria Inlet, Lieut. Peary changed his course southeast, expecting he would be able to skirt it and get around its head, as he had already turned that of Petermann and Sherard Osborn. But the coast, now clearly in sight on the left, maintained its trend in a direction almost true southeast

and parallel with the course adopted, and several glaciers were passed, all flowing in a northeasterly direction.

At length, on July 1, land was sighted almost due east. It was mountainous, free of ice or snow, and through a depression between two of its highest knobs nothing was seen in the sky beyond of the ice blink, nor of that blue haze indicating land. What could it be then but a lofty headland, and what beyond but the waters of the high Arctic ocean washing the eastern coast of Greenland?

The northern terminal point of the large glacial mass which covers the whole interior of Greenland had been reached—that was clear. At its foot, before the travelers, lay a bare, stony country; beyond it the higher land first seen, and beyond that—what?

Selecting a spot which seemed most favorable to a descent from the ice-cap, and determined to solve without delay the mystery which the heights in the east concealed, Lieut. Peary, leaving Astrup in camp, proceeded at once over the rough, broken, stony ground towards the depression seen between the mountains. The distance did not seem great, probably four or five miles, and a few hours would suffice to traverse it and return. But the mountains appeared to recede as the explorer advanced. Every hill which was climbed, in the belief that surely it was the last intervening between the goal, was found, when its top had been reached, only to reveal another eminence beyond. The ground was excessively

difficult; the sharp, hard splinters of broken rock, which covered it in a confused layer, cut mercilessly through the footgear of the traveler; the oppressive heat, the steady ascent—all these conspired to make this one of the hardest pieces of work of the entire trip.

At first the country traversed was absolutely barren, the stony ground showing not even so much as the trace of a lichen. What words therefore can describe the pleasure of the voyager when suddenly he heard a twittering and a little black and white snow-bunting flew overhead? Soon another trace of life was seen, a patch of ground, under the lea of a huge boulder, fifteen or more feet high, covered with a luxuriant crop of grass. We can imagine his feelings when it is remembered that these bits of rank vegetation are in all Greenland a sure indication that the spot was once the site of an igloo, and how his pulse must have quickened when it flashed on him that possibly he was in proximity to human beings.

Closer inspection, however, showed that the place was a shelter for musk-oxen, some hair and other traces of the animals being found. Musk-ox traces now became numerous; a bleached skeleton of one was seen with the bones broken in such a way as to lead Lieut. Peary to suppose the animal had been killed and devoured by wolves.

Flowers, too, began to appear, purple, white, and the ever-present yellow Arctic poppy, and through the air snow-buntings fluttered hither and thither with merry song.

The apparent five miles distance to the opening in the hills had now lengthened into thrice that number, and still the coveted sight beyond was not obtained. Unwillingly enough, but compelled thereto by the condition of his cammiks and the cuts and laceration of his feet, he returned to camp, where he found Astrup anxiously waiting, and ready to serve his companion with all three of the deferred and accumulated meals of the day. What had been supposed at the outset to be only a short excursion of a few hours' duration had been prolonged into a twenty-four hours' task, and the worst of it was that its main purpose had been frustrated; the outlook over those alluring summits beyond had not been obtained.

After a refreshing sleep, therefore, it was resolved by Lieut. Peary to leave the sledges and take Astrup and the dogs and rations for five days and set out again on the same path. Accordingly an early start was made; the dogs scenting the land could hardly be held in leash. The torrid sun had melted great lakes into the face of the glacial ice, and these, breaking the banks of snow which restrained them, rushed and fell tumbling in roaring cascades down the slope, and formed a river at the base of the ice-cap. This had to be forded, after which the way lay for a mile or more through slush, in which the party floundered until at length they reached the bare country beyond. The route chosen was slightly different from that traversed by Lieut. Peary on his first excursion, and proved, if possible, infinitely worse. Barren beyond conception, the ground was a layer of flint-hard

"ON THE HOME STRETCH"—SAILING OVER THE ICE-CAP.

stones, compacted into a conglomerate by the huge glacial weight which for ages had borne down upon them. The upturned edges cut through leather and into the feet, and here and there larger stones lay interspersed, over which the travelers frequently stumbled, sustaining severe bruises and cuts. No sign of life was visible but an occasional poppy, but musk-ox trails again were plentiful. The dogs, whose number was now reduced to eight, suffered exceedingly during this rough marching. Again one hill followed the other in provoking succession, still obstructing the desired view. Tired and utterly worn out the party encamped at last for a few hours of much needed rest.

When they had refreshed themselves and had resumed the arduous march, just as they were picking their way down the steep sides of an ancient glacier bed, two black specks were seen in the distance. Several experiences of the same nature, when a supposed musk-ox had turned out on a nearer view to be nothing but a boulder among the smaller stones, had prepared the travelers for a similar disappointment. But presently the two objects were observed to have changed position. They were alive; this time there was no mistake about it. Here at last was an opportunity to bag fresh meat and change the monotony of two months of pemmican diet. Cautiously creeping upon the victims Lieut. Peary fired and had the satisfaction of bringing down both a bull and a cow, as well as a yearling calf, which had been concealed from view behind the larger animals. Aches and pains now counted for nothing in the eager rush

forward. After rapidly skinning their game and cutting out the sirloins and choice morsels for their own use, one of the carcasses was shouldered and carried towards the dogs. The latter were lying about in a dispirited fashion, licking their wounds and bruised feet, when the still warm and reeking mass was thrown amongst them. Here was meat, fresh, bloody, raw meat. With a howl of delight the pack rushed upon it and fell to, until in no very great while a heap of bones was all that was left.

In the meantime Astrup had found a small grass-covered spot, whose bright green was dotted with Arctic flowers, the ever-present poppy among them; he had spread the skins of the musk-oxen and put up the tarpaulin as a screen from the sun, and here upon this sumptuous couch he invited his companion to stretch his limbs, while he proceeded to prepare a supper of musk-ox steak. Alongside the camp a little brook murmured over the stony bottom; the twittering snow-bunting made music pleasant to the ear; even a bumble-bee was observed hovering in the warm sunshine over the flower-spangled grass plot, and the flies around the remains of the musk-oxen were gathered in thick black swarms as numerous as in our own climate. To attempt to move with the dogs gorged with their recent heavy meal was out of the question; to leave them behind equally so, and a few hours' rest was therefore absolutely necessary.

The march was resumed in excellent spirits by all and at last the summit of the high land was reached. It was

found to be a rather small plateau, its further edge descending in a cliff 4000 feet sheer down to the sea. At the foot of the cliff, flowing northward, was a tremendous glacier twelve miles across and measuring at least twenty around the periphery of its discharging point. Beyond the glacier to the east the cliffs rose again, as high as on the hither side, and in some places higher. In the north was seen the mouth of a fiord reaching from the face of the glacier back into the land in a westerly direction, and probably connecting with Victoria Inlet. Looking east beyond the glacier was seen a great bay stretching east and northeast. The land of its northern shore, as well as the land beyond the fiord, was observed to be free from snow. The northeastern extremity of the Greenland continent had been reached. Greenland is an island.

It was July 4, 1892, and in honor of the day the bay was called Independence Bay; and the great glacier, Academy Glacier, in honor of the Academy of Natural Sciences. A cairn was built of piled-up stones; within was deposited a record by Lieut. Peary, endorsed with the usual request to the finder to return the same to the Secretary of the Navy. The gold-fringed silken national banner which had been presented to him by the academy was fixed to the long bamboo rod, which the explorer carried throughout the journey, and planting the same upon the cairn, it was unfurled—the first flag of any nation that ever floated over the eastern shores of Greenland above the seventy-seventh parallel.

The day was further celebrated by a princely feast in which a thimbleful of brandy for each of the feasters and musk-ox steak with veal cutlets of the same species formed a leading feature, and then they rolled over on their backs and fell asleep.

On July 5 the return was begun; and by a singular coincidence, on the very day that the explorers turned their faces towards McCormick Bay, the relief expedition left St. Johns in the *Kite*, destined for the same point from an opposite direction. The walk over the stones to the ice-cap was a repetition of the experiences of the previous crossing, and, arrived on the ice, it was found necessary to rest two days in order to give the dogs an opportunity to recuperate from the hard usage they had had.

The homeward march over the ice-cap was uneventful. To avoid all possibility of again encountering the difficult ground at the head of the northern fiords the course was shaped far inland, right over the back of the interior glacial mass. Much of the traveling was at the high altitude of 8000 feet above sea level and through the clouds, and for two weeks the party floundered in deep snow drifts. As they approached nearer homeward all superfluous baggage was abandoned and what remained loaded on a single sled. The dog team had been reduced to five, all the others having fallen victims to their work, and killed and fed to their fellows. A sail rigged to the sled, and made of the tarpaulin covering, was found useful; the winds, which blow steady from the

interior in a direction perpendicular to the coast-line, taking almost all the strain from the dogs and at times entirely sufficing to move the sled.

At length familiar landmarks hove in sight—Dome Mountain, a great hummock between the inland ice and the head of McCormick Bay, lay in the path. The endeavor to cross its convex back had to be given up for a time, until its snow surface, softened by the sun, should be frozen over. After a few hours' rest traveling over it was found practicable. The crest was gained, and as he did so Lieut. Peary saw a number of dark objects two miles off, moving in the direction from which he was coming. Thinking it was his own party, he called to Astrup: "There, there, the boys are looking for us," and discharged his carbine. The next moment a cheer was heard coming faintly across the snow field, and another look showed that the party numbered seven or eight. Realizing that it must be a relief party from America, Lieut. Peary lengthened his strides on his snow-shoes; Astrup was just behind, gliding gaily on his skis, with the dogs, who now needed no urging, on a dead run down the slope—and soon the explorers were among the party of Prof. Heilprin, shaking hands, exchanging greetings and received with joyful congratulations.

CHAPTER XIV.

THE "KITE" IN TROUBLE.—THE PEARY PARTY ON INGLEFIELD GULF.—THE RELIEF PARTY IN CAMP.—A MURCHISON SOUND GLACIER.—HEAVY GALES AND ROUGH EXPERIENCES.—MR. VERHOEFF MISSING.—PREPARATIONS FOR SEARCH.

UNTIL after the return of Lieut. Peary and Mr. Astrup from the inland ice the experiences of the members of the relief party, though full of exciting incidents, had yet been altogether most pleasant, and accompanied by uniform good fortune and no suspicion of actual danger. But on Sunday immediately succeeding that momentous event, that is to say, on August 7, the *Kite* twice made an effort to get herself into serious trouble, and each time nearly succeeded. The day opened quietly enough, scarcely a ripple disturbed the waters of the bay, and the weather was uncomfortably warm. About dinner time, however, a strong breeze came up from a glacier valley at the head of the bay, which soon reached the proportions of a small gale, and caused the *Kite* to kick up her heels like a young and frisky colt, and before long to start landward, dragging her anchor. For some unexplained reason this was not noticed by the crew until she was within dangerous proximity to the rocky shore. Captain Pike, who had

been quietly reading in his cabin, when apprised of the trouble, promptly rose to the emergency, and manœuvred to get her into deep water. After a severe struggle he succeeded in doing so. This done, he ordered the anchor up, and declared his intention of steaming about in the upper end of the bay until the time came to return to the Red Cliff House. Accordingly, the *Kite* was got under way, but she had scarcely reached the middle of the bay before she ran her nose two feet into a mud bank, knocked off a large piece of her false keel, and careened until it was almost impossible to keep a footing on deck. Fortunately the tide was rising, so that she was not kept in this uncomfortable position more than an hour; but this annoying event following so closely on the other was too much for Captain Pike, and as soon as he had clear water under his keel, he sent the vessel down the bay at full speed and never stopped her until opposite the Red Cliff House.

Two days later Lieut. Peary started with Mrs. Peary, Mr. Verhoeff and some Eskimos for the head of Inglefield Gulf, at which place Mr. Verhoeff left them and went on that private excursion to Robertson Bay, which, in the opinion of nearly every member of the two parties, terminated in his death. The day following the Pearys' and Verhoeff's departure all of the members of the relief expedition, save one, proceeded to the entrance of Inglefield Gulf, where they camped for three days, hunting game, gathering botanical specimens and studying the movements of glaciers. This trip was not

as pleasant as it might have been, for during almost the entire period the campers were treated either to nasty, cold rains or heavy snow, which melted as fast as it fell. An exciting walrus hunt and the view of a remarkably handsome glacier, however, were ample compensation for any personal discomforts which were suffered.

This glacier was evidently one of the receding type. It was about three miles wide and flowed into the valley between two hills of white sandstone, through which basalt had thrust itself in great spurs, towers and pinnacles. The entire valley showed marks of glacial action, proving that the mighty river of ice had once extended down its whole length. The face of the glacier is fully 100 feet high, and curves outward from the sides in shape like a fan, the outer boundaries of which must measure fully eight miles. Like a huge wall of marble it rose from the valley, which it had torn up into a place of terrible desolation, the débris of the shivered rock sides bearing evidence of the tremendous weight and force that had ground them literally to powder. Most of the ice composing the glacier was of a pure white color, with striations of blue and gray, but some parts of it had waving lines of yellow, brown and black, just like the prized marbles of Tennessee. From the summit and through the pot holes streams of water poured into a large water-course which follows the front of the glacier. These streams have worn the ice, which is almost as hard as rock, into great flumes and polished them into forms

of great beauty and in color like Mexican onyx. In one place the large water-course has undercut the glacier, forming a large cavern into which two of the party went for a short distance; but the water dripping from the roof, and the feeling that the mass might fall at any moment, made the place too unpleasant for them to remain very long.

FACE OF A GREENLAND GLACIER.

The camping party returned to McCormick Bay shortly after midnight of August 12. Early on the following day Mr. Gibson came back from a hunt in the Five Glacier Valley, a depression in the hills on the north side of McCormick Bay near its head, which

extends nearly to Robertson Bay. For the first time it was now learned by the members of the relief expedition that Mr. Verhoeff had separated from the party of Lieut. and Mrs. Peary in Inglefield Gulf. It was ascertained that, three days before, Mr. Verhoeff had appeared on the shores of McCormick Bay and informed Mr. Gibson that he was going up the valley to collect minerals, and would be gone two days. He then went his way, but six hours later returned unexpectedly and told Mr. Gibson that as his absence would probably be four days instead of two, not to wait for him, but to return to the Red Cliff House, and at the expiration of that time to send him a kajak and he would come home in that. As Mr. Verhoeff, it was said, was not very expert in the management of the native boat, and as it is not considered safe to traverse McCormick Bay in that kind of craft, instead of complying with his wish, Mr. Gibson on Tuesday, August 16, with Mr. Bryant and three Eskimos, Equa, Onolka and Koko, took the *Faith* and went after him.

That night the storm of the previous week which had begun clearing away on Monday morning, and had entirely ceased by Tuesday afternoon, returned and began raging with redoubled fury, continuing all day Wednesday. As Lieut. and Mrs. Peary were already more than a day overdue from Inglefield Gulf, considerable alarm was felt for their safety, and fears were also entertained for Mr. Gibson and Mr. Bryant, the period for whose return had likewise passed. Early on the following morning,

MR. MEEHAN AND DANIEL, THE ESKIMO INTERPRETER.

however, though the gale still continued, the two latter returned without Mr. Verhoeff, and late the same night, Lieut. and Mrs. Peary also came back, having been compelled to leave their boat near Cape Cleveland and to make the rest of the way to the Red Cliff House over the stony beach. Both parties had rough experiences to relate, particularly that of Messrs. Gibson and Bryant, who had supplied themselves with but little food, and had nothing but their boat to shelter them from the cold rain and the fierce gale, besides which they pretty thoroughly exhausted themselves in their fruitless search for Mr. Verhoeff.

It had been expected that, by August 17, all of the belongings of Lieut. Peary and of the members of the North Greenland Expedition would be on board the *Kite*, so that a departure from McCormick Bay homeward could be made on the following day, but Mr. Verhoeff's continued and mysterious absence, of course, compelled the abandonment of this intention. This absence had now become so prolonged that both Lieut. Peary's party and the relief party became seriously alarmed for his safety, the more especially, since it was known that he was insufficiently clad to endure the bad weather which had been prevailing, and since Mr. Gibson and Mr. Bryant, with the aid of the three Eskimos, had not been able to find any traces of him in the place he was supposed to be. It was therefore resolved to make a systematic search for him, which was accordingly begun at once and continued

almost without intermission for seven days and nights. In this hunt the Peary party, the relief expedition, and such of the crew of the *Kite* as could be spared, participated, besides nine Eskimos, who were stimulated to extra exertion by the offer of rifles and other articles valuable to them.

CHAPTER XV.

THE SEARCH FOR MR. VERHOEFF.—HOW IT WAS CONDUCTED.—FIVE GLACIER VALLEY.—TRACES OF THE MISSING MAN.—EVIDENCES OF HIS DEATH.—ABANDONMENT OF THE SEARCH.

AS a beginning, Lieut. Peary, Mr. Gibson, Mr. Astrup and four Eskimos rowed to the Five Glacier Valley and made an exploration of it to the north. While they did this, the *Kite* was taken to Robertson Bay with the relief party, Dr. Cook and five Eskimos, to search the south side and work over towards Five Glacier Valley, where the first party had been despatched. They first made inquiries of the family of Eskimos living at Igloo Duhomey without learning anything of Mr. Verhoeff, and then divided into two parties, one under Dr. Cook and the other under Professor Heilprin. Each made an exploration of one of the valleys leading towards the ice-cap on the south, which was continued until early the next morning, the *Kite* meanwhile steaming slowly along the shores, Captain Pike keeping the steam whistle blowing at regular intervals. The three parties on shore crossed each other before returning to their respective starting points, and covered a tract of territory fully five miles wide and ten miles long, but without learning anything of the young mineralogist.

Later in the morning, the ship's crew having kept a sharp lookout while the relief party took a short sleep, the *Kite* was taken once more to McCormick Bay and stopped at its head, where Lieut. Peary was met with. From him then were learned the circumstances under which Mr. Verhoeff went on his probably fatal journey. It appears that while in Inglefield Gulf, Mr. Verhoeff asked permission to go to the Five Glacier Valley for minerals, saying that he would require but two days for the work. Knowing that the trip proposed was a safe and very short one, and that Mr. Gibson was there hunting, Lieut. Peary consented provided he would promise to return at the time stated. Mr. Verhoeff then started, taking with him three pounds of pemmican, and a revolver, with fifty cartridges, besides his geological hatchet and a bag, and a few hours later met Mr. Gibson, as related in the last chapter.

From Lieut. Peary, the relief party learned that neither he or those with him had found any traces of the missing man. The anxiety for his safety now became greater than ever; a general consultation was held and plans perfected for another and systematic search. In conformity with the plan which was adopted, Lieut. Peary once more entered the Five Glacier Valley. Taking, twelve Eskimos, besides his entire party, except Henson who, with Mrs. Peary, remained at the Red Cliff House, he extended them in a straight line clear across the valley from side to side, and advanced with them step by step along its entire length, and over the ice-cap

and table-land to Robertson Bay, each man carefully searching the ground for traces of the missing one as he went. So minutely and thoroughly was this done that a knife and handkerchief, lost by one of the party the year before, was found, but nothing of Mr. Verhoeff was observed.

At the same time while the Peary party were doing this the members of the relief party made search of a large glacier at the head of McCormick Bay on its southern side. This was started in the afternoon, and was not concluded until the next morning, and while the party was out the thermometer fell below freezing point and a heavy snow storm began, lasting for many hours.

The glacier explored has a motion of several feet a day, and as it extends some distance into the bay, that portion of it was broken up into terrible crevasses of great width and depth, and the ice composing it at that place heaved and piled up, until it resembled a group of white marble mountains. Further up, the ice was hummocky, with little lakes and streams of water, but there were few crevasses, and these not of a very dangerous character. The glacier is seven or eight miles long, and three or four branch glaciers empty into it, but without the usual tremendous tearing up, the upheavals giving the main body the appearance of frozen sea waves.

This glacier was searched, because it was thought possible that, by chance, Mr. Verhoeff might have returned to Mr. Gibson's camp, and finding it

abandoned and no boat left there for him, had decided to make his way to the Red Cliff House by land. If so, this body of ice was in his path homeward. What made it more probable that he should have determined on taking so dangerous a route was, that he had accomplished the feat of crossing the same glacier during the winter, when it was covered deep with snow.

When the relief party returned to the ship for sleep, Captain Pike sent his first officer, Mr. Murphy, with several of the crew to explore the table-land on the east of the glacier, as well as the gorge leading to the ice-cap. These remained out until evening, when Professor Heilprin took another party and explored the north side of the same glacier they had traveled over the night before while Mr. Meehan with two men made a close search of the easterly shore of McCormick Bay, from thence towards the Red Cliff House, a distance of nine miles, the remainder having been previously covered. Neither party returned until the next morning, Sunday, August 21. Shortly after they came back, Lieut. Peary too returned from his exploration of the Five Glacier Valley.

Until now, the fifth day of the search, but little thought had been entertained by any one of a fatal accident having happened to Mr. Verhoeff, but the careful exploration of the Five Glacier Valley, of the glacier at the head of McCormick Bay and its approaches, as well as the south shores of the bay to the Red Cliff House, without any results, caused the gravest conclusions to be drawn, and a belief that he was dead began

to be expressed. Nevertheless, the search was pushed, if anything, even more vigorously. Mr. Astrup and Mr. Gibson, with some of the Eskimos, were sent once more through the Five Glacier Valley, with directions to travel all the way to the shores of Robertson Bay and explore the approaches thereto thoroughly. Lieut.

ICEBERG OFF ROBERTSON BAY.

Peary, with Dr. Cook and the remainder of the Eskimos, took the *Faith* and explored the north shore of McCormick Bay to Cape Robertson, and the south shore of Robertson Bay to a great glacier which empties into it at its head. Then the *Kite* was once more taken to the same bay, stopping only a short time at the Red Cliff House in order that a statement of the ill success

of the search, thus far, might be made to Mrs. Peary. In Robertson Bay Lieut. Peary was met and taken on board, and then, all hands being worn out from many hours' continuous work, a short period was taken for sleep.

Early on the following morning, the sixth day of the search, it was resolved to explore the great glacier at the head of Robertson Bay, Lieut. Peary's party taking the south side and Professor Heilprin the north side. This was at 10.30. About three hours later the two parties met in the middle of the great glacier, and Lieut. Peary's sad face presaged unwelcome news. In a few words he related that traces had been found by Mr. Gibson of Mr. Verhoeff, which indicated that unfortunate man's almost certain death. The first signs were footprints, undoubtedly Mr. Verhoeff's, and, according to the unanimous opinion of the Eskimos who followed them up, they had been made on or about the same day he had been last seen by Mr. Gibson. These footprints led along the south shore of Robertson Bay, and were sometimes imprinted in mud and sometimes on the foot ice. A few feet below the point where the south gorge between the cliffs and the glacier at the head of the bay opened into the shore of the bay itself, there were found neatly piled on a rock a number of minerals which bore the marks of a hammer and here and there the blue from a corned beef or pemmican can. Beside them were also found a small scrap of blue paper, possibly torn from the same can, and a small

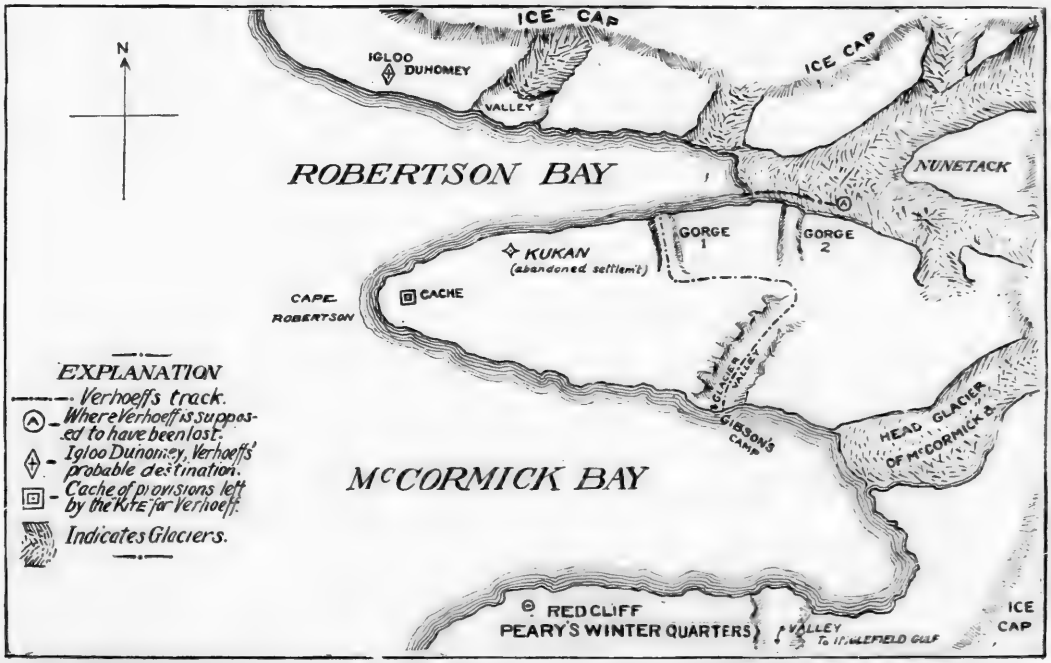


CHART OF McCORMICK BAY AND SURROUNDINGS, ILLUSTRATING THE SEARCH FOR VERHOEFF.

piece of string. Just beyond is a short but steep mound of stones, sand, mud and ice, which led to the gorge above. Here apparently Mr. Verhoeff had attempted to climb, but had slipped back to the base, for there were marks in the mass which indicated this. To the right was another slope to the gorge not so difficult of ascent. Just above this Mr. Verhoeff's footsteps were again identified, and here and there one was found leading for some distance along the gorge beside a stream, and then up the side of the south lateral moraine towards an awful crevasse, and here all traces of the missing man were lost.

In spite of this depressing news, search was continued with avidity, Lieut. Peary and those with him crossing the tracks of the Heilprin party to the north side where they made a long and careful examination of the gorge running east and west. The other party picked their way between and around numerous crevasses to the centre of the glacier and thence up to its junction with a large body of ice which flowed into it from the north, where the gorges running east and north were closely gone over. Retreating from this place the party worked their way little by little toward the lower part of the south side. On account of the increasing number and bad character of the crevasses as the discharging point of the glacier was approached, this task was only accomplished after many hours' painful work. At length, however, the south gorge was come upon and junction made with Mr. Gibson, Mr. Astrup and Dr. Cook.

This glacier, which, from every indication, had claimed a human sacrifice, is a remarkable one in many ways. Imposing in its own body, it is surrounded by scenery unexampled in Greenland for picturesque features and grandeur. It empties directly into the head of Robertson Bay, where the granite rocks which bound it, crimsoned by lichens, tower in great peaks and pinnacles to heights of more than 4000 feet, and where cliffs show unbroken fronts for a thousand or more feet sheer from the water's edge.

The glacier is evidently a rapidly moving one, and where it plunges into the bay shows a wall of ice nearly if not quite 100 feet high, broken into countless jagged configurations. Its total length from the névé basin, into which the inland ice pours the supply for its sustenance, is perhaps eight miles, and its width at its most extended part five miles, while its discharging point is not more than three in a straight line and five in its arc.

Into the main stream three or four glaciers of more than ordinary size empty at almost regular distances apart, tearing it up into wild confusion for many hundred yards. At the juncture of one of these arms and the principal glacier there rises a magnificent nunatak, or mountain peak, projecting above the eternal snow and ice. The face of this nunatak is broken and seamed with numerous ledges where vegetation has gained a foothold to a surprising extent. Above thick carpets of green moss, dandelions, potentillas, buttercups

and poppies rested like drops of gold on emerald. Among them were many other flowers mostly unfamiliar, but the *Draba*, or whitelaw grass, and the chickweed smiled with their familiar snow-white blossoms among the Arctic strangers.

The bed of the valley over which the main glacier flows is evidently of an undulating nature, for throughout its entire length the ice is in hills and ridges, resulting in tremendous crevasses extending in every direction, which, as the discharging point is reached, become so numerous and awful that the ice not broken stands in immense cones and ridges, over and among which no man could possibly pass.

These crevasses are of unknown depth, reaching probably to the bottom of the glacier a hundred or more feet below the surface. They are the more treacherous and dangerous from the unusual number of snow bridges which span them. These snow bridges cover the top of a crevasse, hiding it from view and, having almost the same color as the abutting ice, appear solid and safe to step upon. It is only the trained eye that can distinguish their slightly whiter tint, and a thrust of an alpenstock will reveal their dangerous character. These snow bridges may be a foot thick or they may be six feet, but they are all equally perilous. Sooner or later the unfortunate who attempts to traverse them must go through, and then, unless he is tied by a rope to a companion, there is no possible chance of him escaping a horrible death.

It was to the worst possible spot in the whole glacier, where the ice seemed to have been rent and torn into thousands upon thousands of fragments, that the footsteps of Mr. Verhoeff led from the lateral moraine on the south side, and from here no signs of his having retreated were found.

It was nearly midnight on August 22, the day on which these traces of Mr. Verhoeff were found, when all the parties, including the Eskimos, returned to the *Kite* and took a much needed rest. This was the first time since the search was begun that at least one party was not engaged in it. But not only were the members of both expeditions worn out, but the Eskimos themselves showed signs of the strain which had been put upon them.

In the morning, after a consultation, it was determined to make one more search. Mr. Gibson and a number of Eskimos were sent back to the glacier at the head of Robertson Bay; Dr. Cook, with Mr. Astrup, to a glacier on the north side of the bay and to the west of the one Mr. Gibson had gone to, while the relief party divided into two sections, one under Professor Heilprin to explore the approaches to still another glacier further to the west, and the other section, under Mr. Bryant, to examine the coast line from this last body of ice and a valley leading to the Igloo Duhomey. They traveled over the ground assigned to them respectively all day, but with no further results, and with heavy hearts finally the unanimous opinion was

expressed that further search was useless, and the order was given to take the *Kite* once more to McCormick Bay to make preparations for leaving Arctic waters.

To provide, however, for the slight chance that Mr. Verhoeff might be alive, the *Kite* was stopped at Cape Robertson and one year's provisions cached on a prominent spot and letters for him written and given to the Eskimos in case he should turn up. The ship was then got under way, and a little before midnight was anchored in front of the Red Cliff House.

CHAPTER XVI.

LEAVING MCCORMICK BAY.—SORROWING NATIVES.—NEARLY ICE-BOUND.—A BEAR KILLED.—ARRIVAL AT GODHAVN.—YANKEE DOODLE IN GREENLAND.—AN AURORA.

THE next day, as soon as the morning meal was disposed of, all haste was made to get the remaining traps stowed, a speedy departure being now imperative in order to avoid being caught in the ice, a possibility which was daily developing into a certainty. The remaining five of the dogs which had accompanied Lieut. Peary and Mr. Astrup on their inland ice journey were taken on board to be conveyed to the United States, as well as "Jack," one of the two Newfoundland dogs that had accompanied the expedition the previous year. The other dog of the same species, "Frank," was left behind and given to Equa, who had taken a fancy to him, a feeling which the animal apparently reciprocated. For three or four hours the boats were kept plying between the shore and the *Kite* with the stores left over from the past winter and with the rich collections of ethnology and natural history which had been made by the North Greenland Expedition. At length, by one o'clock, there was nothing left to do but take leave of the good-natured, kind-hearted natives.

Until this moment the thoughts of departure from McCormick Bay on the homeward trip had had no other than pleasant associations, but now that the hour had come none could help a feeling of regret. This feeling was shared, as their actions betrayed, by the natives. Instead of running about laughing and chattering, as was their wont, they stood around in little groups, and Equa, the brightest and jolliest of the whole settlement, who had donned in honor of the occasion a dirty white shirt and an old coat given him by one of the party, was forced to turn away more than once to hide the tears which gushed from his eyes in spite of his efforts to the contrary, and he uttered his two English sentences, "What's de matter wid ye," and "What ye call him," with only half his usual aplomb.

Perhaps one of the most touching incidents of the leave-taking was when Magipso, one of the women, called the only married man on the relief party into her tupic, and, with tears streaming down her face, handed him two miniature water-buckets made of seal-skin, which she brought forth from under a pile of skins

on the ground, and made him understand they were for his two "pickaninnies" at home. The return gifts of thimbles for herself and her little ones, however, brought back the smiles, and she went forth from the tupic exhibiting them to the other women, to their envy and jealousy.

By-and-by a boat heavily laden left the ship and was rowed towards the house. All of the "huskies" or Eskimo men were drawn up in line on the shore and near by stood all the women save one—a child-wife who was lying ill in her tupic. When the boat touched the land, a great shout went up from the natives, and their sorrow for our going vanished instantly, for heaped up in it were bundles of poles, iron spear heads, iron pots, spoons, scissors, knives, saws, hatchets, cleavers, and many other articles highly prized by them. Their joy was unbounded as these things were divided among them, share and share alike, except the child-wife, who, because she was sick, was the recipient of many additional gifts from individual members of the party. Then Lieut. Peary caused their nearly full cup of happiness to overflow, by presenting the entire settlement with the Red Cliff House, on condition that they should not tear it down that winter—a condition they readily agreed to.

At this point a shrill whistle from the *Kite* notified the parties on shore that the hour for departure had come, and with that moment the evidences of grief on the part of the natives were again manifested and with

redoubled force. The white people no less were moved. Every one was shaken by the hand, and then with shouts of farewell the members of the two expeditions sprang into the waiting boat and were rowed to the ship. A few minutes later she steamed slowly out of the bay with the American flag floating at her masthead

NATIVE WOMAN OF GODHAVN.

and her whistle blowing loudly and continuously, and soon the Red Cliff House faded out of sight.

Just after passing Northumberland Island, ten miles south of McCormick Bay, the travelers were made aware by Captain Pike how close had been their escape from being compelled to spend the winter in the Arctic regions, and the force of the skipper's remark that a day

or two's delay would have been enough was painfully evident, for a great field of old ice cemented together with young ice nearly three inches thick was encountered.

It had been Professor Heilprin's intention on leaving McCormick Bay to stop at all the native settlements between that place and Cape York and distribute the gifts still remaining, and to make search at Cape York for the iron mountain containing the native iron which the Eskimos use to strike fire from, but this young ice put a quietus on these plans and all speed had to be made southward. The *Kite* entered Melville Bay on the afternoon of August 25, and in fifty-eight hours was safely out of it, having met with nothing but thin and rotten ice, through which she made her way without difficulty. Before passing the confines of the bay, however, the relief party secured what the members had been longing for from the moment they entered Arctic waters—a polar bear.

When first seen, the animal was not more than half a mile away, sitting on a large cake of ice, looking at the vessel, and such was the curiosity of the foolish beast that he allowed it to approach within a hundred yards before taking alarm ; then he turned to make off, but his resolution came too late. He ran for the water to make good his escape, and had almost succeeded in reaching the end of the cake, when the party fired at the word of command, and he fell pierced by several bullets. His vitality was such, however, that it required two or three

A TROPHY (POLAR BEAR).

more shots to compass his death and secure for the Academy of Natural Sciences a fine skin and furnish the table of the *Kite* with tender bear steaks.

Leaving Melville Bay the *Kite* steamed directly for Waigate Straits, which separates Disko Island from Greenland proper, arriving there on August 29. She stopped at a place called Atanekerdluk, where a seam of coal crops out about 1100 feet above sea level which is reputed very rich in fossils. A few hours' search secured for the expedition a magnificent collection and then the *Kite* proceeded to Godhavn, where she arrived the next morning, August 30.

The reception of the two expeditions at this place was as hearty as could be desired, and in the evening they attended a dance given by the Eskimos, where they waltzed and polkaed with the Eskimo women as partners. The affair took place in the large workshop of the settlement; the shavings, work benches, etc., had been pushed to one side to give plenty of space for the dancers. Three tallow candles lit up the room faintly, and Daniel, the faithful interpreter, who on account of his journey north had become a great man at Disko, was master of ceremonies. Two fiddles and an accordion furnished the music, and the nimble feet of the native women did the rest to infect all with the dancing mania. Most of the airs played were Danish, but the explorers were awakened to astonishment when they heard the familiar tune of "Money Musk," and when later on the band suddenly struck up "Yankee Doodle" they broke

out into patriotic cheers. And here they were in a land where many of their friends at home believed they were wandering about in misery, enveloped in furs to keep out an unregisterable degree of cold, and eating blubber and tallow candles to sustain life, dancing with open windows, in their shirt-sleeves, and with profusely perspiring brows. The contrast between the imaginary and the real was extremely humorous. After the dance a dainty luncheon was served at the house of the inspector of Godhavn.

On September 1, the party bade farewell to their friends at Godhavn, including Daniel, who carried out a previously expressed intention "to much cry when ship go," and started for Godthaab, the capital of the Southern Inspectorate of Greenland. The journey thither was without special incident, save one; this was a splendid display of the aurora on the night of September 2. It began in the northwest and swept with marvelous rapidity across the sky in a waving luminous cloud of yellowish white, until it formed a perfect arch, extending from horizon to horizon, and apparently overhanging the ship. From this arch shot out myriads of white shafts, with here and there one of pink and of red. After a time it slowly faded away, only to reappear in a new and equally enchanting form, when, starting again in the northwest, and taking the same direction as before, it assumed the form of a great diaphanous curtain, hanging from the heavens in many graceful, moving folds. The display lasted for hours.

CHAPTER XVII.

GODTHAAB.—THE OLD NORSEMEN.—AN ESKIMO NEWSPAPER.—FAREWELL TO GREENLAND.

EARLY in the morning the *Kite* was abeam of Sermersut, one of the almost innumerable islands which lie off the west coast of Southern Greenland, and very soon after passed New Sukkertop. New Sukkertop is practically a gigantic rock rising precipitously and almost perpendicularly more than 3000 feet out of the sea, its high peak, with slightly rounded top, giving it a striking resemblance to a huge sugar loaf, and lending a singular appropriateness to the name. Rough and desolate as the place appears, it holds quite a colony of "filial," as it is called in Danish official language, of Eskimos from Godthaab. New Sukkertop is an important landmark for Arctic navigators, though they give it a wide berth on account of the dangerous character of the coast.

A few hours later the *Kite* arrived off Godthaab. A kajaker put off from shore and came aboard to pilot her through the dangerous channels to the harbor or ship's haven, but first informing her passengers confidentially, and with an air of importance which he probably

deemed fitting the occasion, that they would not be allowed to land because of the Danish law. The hilarity which greeted this announcement disconcerted him not a little, but the amazement his face expressed was truly comical when, on receiving Professor Heilprin's credentials, the governor and his private secretary came on board and welcomed the party in the most cordial manner.

Godthaab, although one of the largest settlements of South Greenland, is perhaps less known to the outside world generally than any other place in the Arctic regions, being far south of the whaling grounds of the Newfoundland whalers and entirely out of their course. On the other hand it is many miles above Ivigtuk, the only other point in Greenland more or less frequently visited by foreign vessels, which come there for cryolite.

Godthaab is one of the oldest settlements in Greenland. Its history goes back nearly a thousand years, when a Norse colony was planted a few miles from the present site and flourished for a century or so, until the colonists were exterminated by a tribe of savages. These savages, who are supposed by many to have been the ancestors of the present inoffensive Eskimos, are believed to have come over from the American shore, which they probably followed northward to Smith Sound, where they crossed over to Greenland; for the legend is that they came from the North. In their career they killed all and destroyed every vestige of the Norsemen, who, it is believed, were up to that time the only

GODTHAAB.

inhabitants of that bleak island continent. A few ruins of the old Norse colony, it is said, are still standing some miles from the present town.

The present settlement is pleasantly situated on the ocean front, and harbored from the fierce Arctic storms by the many islands which skirt the coast and extend in numerous groups some miles out into the sea. The harbor is behind the tongue of land on which the town is situated, in the fiord, lying between it and the main coast.

It was at this place that Nansen and his companions emerged from the inland ice, after having successfully accomplished the feat, never before attempted, of crossing Greenland from coast to coast. Theirs was the only recorded instance of any systematic exploration of the terrors of the ice-cap until the performance was outdone by the successful crossing and recrossing of the same in much higher latitudes by Lieut. Peary and Mr. Astrup. Having had a slight experience of the nature of that white desolation, we could well appreciate the feeling of relief and joy described by Nansen when he and his companions once again felt the soft green moss of the coast under their feet instead of the hard, gritty, frozen snow through which for many weary weeks they had been trudging. How they rolled in the moss and capered over its elastic surface like boys just released from school. It was at Godthaab, too, that the Nansen party were obliged to remain over the winter 1888-'89, having arrived too late to go in the last ship for

Copenhagen. At the Sunday's dance, which the whole party attended, we saw the Eskimo maiden whose heart-rending farewell from one of Nansen's Laplanders, the loquacious Balto, is so humorously described by that explorer. She seemed to have entirely recovered from the effects of that heartache and looked plump and healthy, and her fat, round and pretty face was wreathed in smiles.

The settlement has more than 200 inhabitants, all of whom, excepting the Danish officials, the rector of the church and the doctor, and their respective families, are Eskimos or half-breeds. The presence of the *Kite* in the little harbor behind the town attracted to the shore probably all of the Eskimos in the place, and the men came out, darting about hither and thither in their graceful kajaks, entertaining the voyagers with exhibitions of their wonderful skill in harpoon and bird-spear throwing.

The marvelous dexterity of the Eskimos of Southern Greenland in the use of the kajak is a matter of common report, but some of the feats attributed to them seemed so incredible that the governor, Mr. Baumann, was appealed to by some of the party as to the truth of these stories. Governor Baumann assured them that they were not only true, but that there were among the Eskimos on board two of the most skillful kajakers on the coast, who would be glad to show their prowess if the visitors desired to witness it. The offer was gladly accepted, and the two men, by direction of Mr. Baumann, prepared for action. They put on their seal-skin jackets and gloves,

and tying them in such a way that they were waterproof, they got into their kajaks and paddled away. When about a hundred yards from the ship they stopped and one of them slowly inclined his body to the right. As he did so, the kajak rolled over until it was bottom side up. For a second or two it remained in this position, and then it began slowly rolling again, and in another second, with a flourish of his paddle, the kajaker had righted his craft and was wiping the salt water from his face and eyes. Meanwhile the other kajaker also overturned his boat and righted it, and did it moreover, two or three times without stopping, apparently, for breath.

After they had both repeated this performance many times, one of the kajakers turned his boat so that the prow pointed towards the ship, and then held it motionless. While he was doing this the other backed off a few yards and then darted at the first with full speed. An instant before he reached him he threw himself slightly backward, raising the bow of his boat, and it sped rapidly and smoothly over the other and into the water again beyond. Amid bursts of applause, they returned to the ship, where, after divesting themselves of their water-proof garments, they were each rewarded with a jack-knife, and were regaled, the governor permitting, with a glass of hot schnapps.

Soon after the whole party went ashore, and under the guidance of Mr. Baumann and Mr. Stevenson, his private secretary, were led over the rocks and marshes to the little town, a mile or more away. Here they were

presented to Inspector ———, and after a short and pleasant chat with this official, who, as well as Governor Baumann and their respective families, spoke English fluently, the party started on a tour of the place until the hour for dinner, to which some had been pressingly invited by the inspector and others by the governor.

The most pretentious residence in the place is the one in which the inspector and his family dwell, and it, as well as the homes of the other Danish residents, is well kept, with grass-plots attached, and is surrounded by neat fences. At Godthaab there is an entire absence of the poverty so evident even at Godhavn, and still more so at Upernavik. The one-story houses of the natives all present a neat appearance and are constructed of frame, with the sides banked up with stones and turf. Godthaab also has a street, with two small but neat bridges spanning streams which flow through the village. Some of the houses of Godthaab are built along this street, which, though narrow, is neatly kept; but generally the buildings, as in all other Greenland settlements, are scattered promiscuously about to the right and left, and are approached by well-worn paths running and crossing each other in every direction.

The Eskimos of Godthaab, unlike their pagan kindred at Cape York and beyond, profess Christianity. At one end of the street just mentioned stands the church with a tower and belfry. The church has a fine toned

ATUAGAGDLIUTIT,

Nalingînarnik tusaruminâssasunik univkât.

№ 1. Ortûparo 4. 1889.

Imait: Nansen-ip ilaisalo Nûngme ukisitdlutik angalasarnere. — Kimugtidsissartup oralugtisi. — Tamardlisit

Nansen-ip

ilaisalo Nûngme ukisitdlutik angalasarnere.

(egdl: L. Möller.)

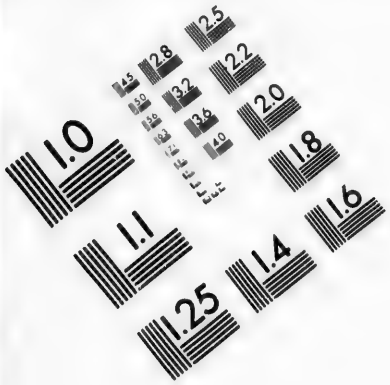
Siorna upernâme 1889 Atuagagdliutit ilaisigut Nansen-ikut sermerssuâkut iliviŋnerat erkartorsvko, oxarpungt Nûngme ukisitdlutik angalasarnere sapingikuma tusârdliûkumârdlugit, mássâkut ivko sapitdorsuit mâne ukisitdlutik angalasarnere oxalualâritsiarniarpâka:

Siornalo Atuagagdliutitigut agdlautiginexarêrpox Nansen-e Sverdrup-ilo tingerdlautigssiaminermik umiatsiausiorsimavdlutik Ameragdlup xinguanit Nûngmut pissut Ortûparip uvdluisa 2-ne. Kingornalo silârdlugtartorssûssox ilai Nûngmit umiatsiâmik umiamigilo aigamikit Ortûparip 12 silagigsilermat sitsât tikiûpait; taimane sule apingikatdlartox.

Nûngmut pigamik avalagfigsaminginik ernginax norxaigaluaxaut, ivigtûnutdlo psortitsigaluarput Fox-imut- aerxuvdlutik, ukiâvatdlârnerale pissutigalugo aiumângingmatik ukininalerput. Ukinialeriarumik erginax xajanigtiterput, sanilexutexarmatalo xâinatik atorssâriartox piumassamingnik xajartuinalerput; tupingnaxautdlo sungiûssilertûssusê, pingârtumik Nansen-ip xajax sungiutilertorpâ; tâuna ernglnangujak sanilexutaerûpox. Ilâne Nuvimpare nâjartulerâ xauvox âsit silârdlugdlune xânersorujugssûvdlunilo, taimâitox âsit xajartortut autdlâuput; taimanilo âsit Nansen-ip xajartortut malikai miterniardlune. Uvdlorssuax nâvdlugo erssiminane xânersuâinarame agsut apivox sigssamut ugdlât âukarnêrutdlune; ûnulersox xajartortut tamarmik tikerarmata Nansen-e kisime tikingilerpox; xajartortut ilaisa oxantigât uvdlûtitdlugo nôrdlit avatâne nâpisimagaluardlugo, kimuinardle nivtailarssuarmut ûngartorox. Tâinaxame utarxilerparput; târsînalermat klsa ânilâugatigilerparput, nivtailarpatdlâxingmat autdlarfigssaerûsugalugo; avalivtalo nunâluit ilânut pisimagaluarune ilisarinaviângingmagit tikigtagarlinginammigit. Târsivigdlunilo niggilerpox erginax nâkissagtilerdlune sulile ersingitsorssûvdlune; taimailingmat ilaisa tumavtalune isumâlugilexârput; nôrdlerput tikisoralugo tusarniartikaluaramiko taimak perângilax. —

Perângingmat ilaisa umiatsiâmik ujarlartorniarumavdlugo pikilerput; pikivdlutik umiatsiagtaar-

An Eskimo Newspaper.—Reduced fac-simile of a monthly publication, edited, printed and published in the Eskimo language, by Christian Eskimos, at Godthaab, South Greenland.



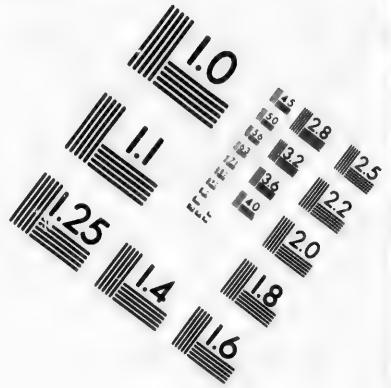
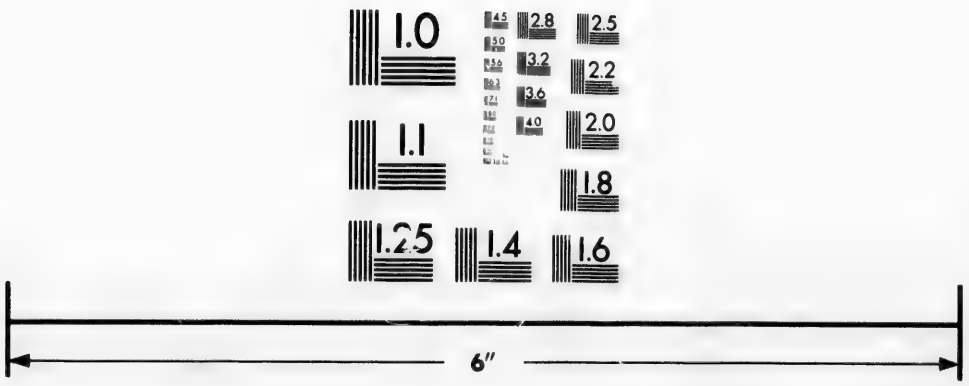
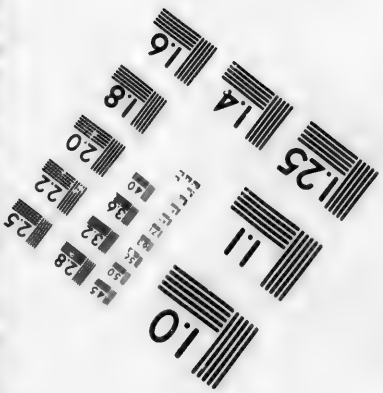
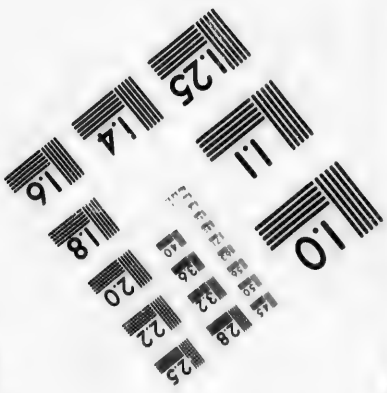


IMAGE EVALUATION TEST TARGET (MT-3)







Photographic Sciences Corporation

23 WEST MAIN STREET
WEBSTER, N.Y. 14580
(716) 872-4503

organ and a handsome altar. Two denominations worship here in harmony, the Greenlandish and the Danish. The first, which holds service from nine to ten o'clock on Sunday mornings, is attended by Eskimos almost wholly and presided over by a native preacher, who also during the week watches carefully over the spiritual welfare of his flock, and has considerable temporal authority vested in him by the inspector. The second service, which is attended by all the Danish residents, is presided over by the rector, and begins an hour after the first is over.

No services are held Sunday evenings, these hours being given over to a ball held in one of the workshops, where every Eskimo man and woman, young and old, dances to the sounds of a fiddle with a heartiness of enjoyment which is refreshing to see, and with a gracefulness and accuracy of time in their steps which would be creditable in any circle of society in our own civilized country.

Godthaab has also a monthly newspaper printed in the Eskimo language, the publishing, editing and typesetting of which is done by natives. It is called *Atuagagdliutit*—said to mean, "That which should be read." Each number has eight pages and is illustrated by wood-cuts, the work of native engravers. It has a wide circulation, reaching, occasionally, as far north as Upernavik, and as far south as Julianshaab. There is also a photograph gallery in the settlement, owned and conducted by an Eskimo, of whose skill an example is

given in the view of Godthaab reproduced in this volume. Besides these evidences of civilization there is a brewery, where a good quality of small beer is brewed, a cooper shop and general store, such as is to be found in all the settlements of the Danish possession.

At Godthaab the explorers saw for the first time since their arrival in Greenland some of our familiar domestic animals. These were goats, chickens and pigeons. The first roamed the hills and furnished the milk supply of the settlement, and the latter have quarters assigned them in sundry cosy little barns erected for their housing and for the storage of hay for the goats during the winter. The Danish residents, while glad of being able to rear goats successfully, yet bemoan the fact that the climate is too severe and vegetation too sparse to allow them to keep cows, these animals not thriving north of Julianshaab, near the southern limit of Greenland.

Within forty miles of Godthaab, on the cliffs bordering a long deep fiord, where it is protected from the fierce winter winds, the *Abies orientalis*, a species of spruce, grows to a height of eight or ten feet. This is its northern limit in Greenland ; above this point there are no hard-wood plants except dwarf-willows, dwarf-birches and a species of huckleberry. As at everywhere else on the coast line, however, other vegetation in the shape of mosses, grasses and blooming plants abound during the summer months.

All of the white inhabitants of Godthaab, the inspector and his family, the governor and his wife, the lieutenant governor and family, the governor's private

A GREENLAND PICTURE.

FAC-SIMILE SPECIMEN OF LITHOGRAPHY EXECUTED BY ESKIMOS.

secretary, besides the pastor of the Danish church and his family, and the doctor and his family, are people of the highest culture, speaking several languages fluently, and each interested in some branch of science. Those of the party who had been favored with an invitation to dine at the inspector's found in the person of his accomplished wife a lady whose doings has been chronicled in books of Arctic travel. She was one of the two mentioned by Doctor Hayes in his book called "The Land of Desolation" who accompanied that explorer on an alleged dangerous trip to the ice-cap on the Island of Disko, near Godhavn, where the two ladies were then living. She is the mother now of several boys and a girl, the latter of whom is just budding into a charming womanhood.

The evening was spent by the entire party at the house of the governor, where he and his wife entertained them with the greatest possible cordiality. Just before her guests departed Madam Baumann sang in English, and with a sweet, sympathetic voice, the air of "Long, Long Ago." Although the brave little woman smiled and chatted merrily enough, there was something in her voice like a longing for home and the association of her kindred which was touching, and when, after good nights had been exchanged, the voyagers were being rowed by eight sturdy Eskimos to their good ship, and they saw the full moon shedding her mild light over the silent waters for the first time since leaving Newfoundland on their northward journey, many hearts echoed that slight,

scarcely perceptible tremor of homesickness betrayed by the singer.

The next day was Sunday, and many of the expedition attended divine services in the large church. Before its conclusion the pastor made an address in English and uttered thanksgiving that the expedition had passed safely through the perils of the far North, prayed for the party's safe return to their homes in America, and closed by reciting the Lord's Prayer.

The next morning, Monday, September 5, the *Kite* sailed away for St. Johns. Before leaving she was taken from the snug little harbor and brought to the ocean front in full view of the settlement. The houses of the officials were decorated with bunting and flags waved from every staff. Then after the departure of the Danish ladies and gentlemen, who had come on board to say their farewells, amid a volley of ordnance from the shore, the *Kite* slowly started, replying vigorously to the salutes with her little cannon, blowing her whistle and dipping her colors, her passengers meanwhile vociferously cheering.

The kajakers flitted about in the water and on the shore the native women had assembled in their picturesque holiday attire, and as the *Kite* steamed close by they sang a sweet farewell song. The rich melody of this air lingered in the hearts of the party long after Greenland's rocky coast had faded in the distance, and it touched them greatly. It was a beautiful finish to their visit to the land which had been to them one long delight.

CHAPTER XVIII.

THE "KITE'S" GHOST.—THE RETURN TO ST. JOHNS.—DEPARTURE FOR PHILADELPHIA.—THE TRIUMPHAL PROCESSION UP THE DELAWARE.—RECEPTION BY THE ACADEMY OF NATURAL SCIENCES.

A FEW hours after the *Kite* had begun her journey to St. Johns, a gale arose which lasted for a couple of days. It was not a severe one, however, and only caused the revival of certain stories which some time before had been in circulation among the crew that the *Kite* was haunted. The ghost who it was claimed had taken up his quarters on board ship was described as a huskie, or male Eskimo, and appears to have boarded the vessel some time during her voyage back from Smith Sound to McCormick Bay. He was first seen by one of the sailors whose "trick" it was at the wheel, and the wraith was described by the man as having come gliding aft and insisting on helping him steer. The man declared that he was not afraid of the apparition, which seized the spokes of the wheel like an old sailor and generally permitted its motions to be guided by the living helmsman. Twice, however, when the latter attempted to port, the ghost insisted on putting it hard to starboard, and the sailor gave way. In both instances it seems the sailor's acquiescence in the ghost's apparent

whim had been fortunate, for, as he solemnly affirmed, each time had the helm been ported, the *Kite* would have run into a large iceberg. The huskie ghost, nevertheless, was not always as useful as he seems to have been on this occasion, but on the contrary was inclined to mischievousness, for various other members of the crew declared that they had seen him dancing in the most

THE LAST ICEBERG.

ridiculous and un-Eskimo-like fashion on the casing of the boiler. Often it happened, so the sailors said, that boxes and barrels were thrown about the deck in the greatest confusion without interference of any visible natural agency, and when the sea was as smooth as a mill pond, and one man swore that the ghost had once, when field ice was all around the ship, clambered to the

crow's nest, at the top of the foremast, and signaled to the man on watch to come down.

What revived the stories of this prank-playing huskie, however, was that once, during the gale, the fireman on duty had come on deck for a breath of air, leaving the furnace doors tightly shut and the steam at seventy pounds pressure. Five minutes later, on returning to his duty, he found one of the doors wide open and the steam gauge lowered by fifteen pounds. As the door could only be opened by the exertion of considerable force and strength, and as no one had been near the place to do this thing, the act was unanimously placed to the account of the wraith by the whole crew. He was a good, honest ghost, however, and did not seriously molest anybody and generally appeared to keep "himself to himself," so that after a while little or no notice was taken of him, whereat, probably, the spook became disgusted and deserted the ship.

On Sunday, September 11, we arrived at St. Johns. It was piteous, the sight of the blackened, charred ruins of that picturesque little city on the hillside. The awful fire which had destroyed it had broken out on July 8, three days after the sailing of the *Kite* for Arctic waters, and raged until fully three-fourths of the place was laid in ashes. The sight of its ruins was the first news we had of the occurrence and there was deep anxiety expressed by all on board for the crew, because many of them, as well as some of the officers, had their homes in the city. All, however, had escaped the calamity save two,

Larry Hackett, the steward, and John Cunningham, one of the firemen. These two found they had lost house and home, their clothing and household furniture ; all they possessed in the world in fact, and that their families had barely escaped with their lives. On Larry Hackett particularly the blow fell heavily, for not only was the house he lived in his own, but he is well advanced in years.

But the calamity which had fallen so heavily on the people of St. Johns did not prevent them from giving the *Kite* and her passengers a royal reception. Flags and bunting were run to the masthead of nearly every ship in the harbor, and the large crowds on the wharves greeted her arrival with rousing cheers. Long before she was brought to the wharf numbers of people had come out in row-boats and boarded her. Then jolly old Captain Pike learned, for the first time, the startling news that he was dead, and Mr. Murphy in command, and the members of the two expeditions discovered that the *Kite* had been nipped in the ice and wrecked and that they were having a hard time of it on the bleak shores of Greenland. The intelligence of the death of Captain Pike had been brought to St. Johns by a Dundee whaler, and the other pieces of news came from Halifax. The finding of Captain Pike still in the flesh and directing the sturdy old vessel in safety homeward was therefore the occasion of great joy and congratulation, for he is well beloved in St. Johns.

HARBOR OF ST. JOHN'S, THE HOME PORT OF THE "KITE."

The happy return and disapproval of the stories of disaster probably helped to influence the ready consent which the owners of the *Kite* gave to Professor Heilprin's request to take her to Philadelphia, and of concluding the voyage there instead of at St. Johns. Immediately on gaining this consent Professor Heilprin telegraphed the news to Mr. Gavin W. Hart, of the Peary Relief Committee of the Academy of Natural Sciences and requested him to secure, if possible, free wharfage. In less than four hours that gentleman wired a reply announcing that Mr. Clement N. Griscom, President of the International Navigation Company, had generously placed one of the company's wharves at the disposal of the *Kite*.

By this time the news of the safe arrival of the expeditions in St. Johns had been sent all over the United States and Europe, and Professor Heilprin and Lieut. Peary, as well as every member of the two parties, were flooded with telegrams of congratulation from relatives and friends and people interested in the undertaking. Many letters were found in St. Johns by the members of the relief party which had been coming regularly from their folks at home, and these accumulations of news were eagerly read by the recipients, their bright faces showing the happiness their contents gave.

Two or three days were required to put on coal and additional supplies for the ship before sailing, and these days were fully occupied in attending the numerous informal receptions and dinners given in honor of the

parties. It seemed almost as though the people of St. Johns had entered into a conspiracy to kill the returned explorers with kindness and hospitality, so that it was well, perhaps, for the latter's relatives, that on Wednesday afternoon, September 14, the *Kite* was in readiness to depart. At four o'clock on that afternoon the vessel left her wharf and was soon on the heaving Atlantic steaming at full speed for Philadelphia. For twenty-four hours she made a good run, when a rough sea arose and she slackened her pace, and the next three days the average was no more than four knots an hour, which caused some of the Newfoundland sailors to express the opinion that the St. Johns girls were holding her back, and that the Philadelphia girls had not yet heard of her coming. By-and-by, however, the sea went down and then the members of the expedition had their turn, and they joyfully declared that the hearts of the Philadelphia girls were now in their work and were towing the ship with their sweethearts at right good speed towards home. It is a pretty sentiment, this saying of the Newfoundland sailors.

On Thursday afternoon, September 23, a pilot boat was sighted and soon after, when forty-three miles from the Five Fathom Shoal light-ship, pilot H. E. Church, of boat No. 3, came on board. He congratulated all hands on their return and informed them that a rousing reception was being prepared for them in Philadelphia. By six o'clock the Breakwater was reached. Here quarantine officers came on board, and after a short examination

allowed the vessel to proceed. At this point the voyagers had a foretaste of the greeting they were soon to get. As the *Kite* began to move up the bay among the many steam and sailing craft the former began blowing their whistles, and those on board the sailing vessels their fog horns, while flags were dipped in every direction. The *Kite* responded right gallantly to each, and it was a busy time for the men at the whistle and ensign halyards for the next hour or two.

At three o'clock of the morning of the twenty-fourth the *Kite* arrived off Chester, where she lay until daylight, when more quarantine officers came aboard and gave permission to continue the voyage, at the same time handing Professor Heilprin a telegram announcing the coming of a tug to escort the returning expedition to Philadelphia.

As soon as they had learned that the expedition had left St. Johns and was proceeding to Philadelphia the members of the Academy of Natural Sciences had begun active preparations to accord it a proper reception. The committee which had assisted Professor Heilprin in fitting out the relief expedition secured the tug *Lillie M. Graham*, proposing to go down the river to meet the *Kite* immediately upon receiving announcement of her arrival at the Breakwater. They invited about thirty guests, comprising the officers of the academy, the members of the West Greenland Expedition, several of the contributors to the relief fund and some of the nearest relatives of the returning voyagers, to accompany

them. The police tug *Stokley* had been kindly placed at the disposal of the press for a similar purpose by Director of Public Safety, Abraham M. Beitler. The *Kite* was reported late in the evening of September 23, too late for her to make her landing that night, but shortly after eight o'clock, on the following morning, the tugs started from Walnut street wharf, and steamed down the river. At twenty minutes past nine o'clock, when a short distance below Lincoln Park, the *Kite* was seen coming up the river in full holiday attire, her rigging gaily trimmed with flags, and the American ensign floating from the foremast, above the crow's nest. Her steam whistle was keeping up an endless series of shrieks in reply to the salutes from the numerous craft passing down the stream to the sea. When the tugs came near enough for those on board to recognize their friends a cheer went up which echoed from shore to shore, and then began an exchange of cries of welcome, of love and joy between fathers and sons, and husbands and wives and children. The *Lillie M. Graham* was brought to the starboard side of the *Kite* and made fast, and the first to spring on board and run sobbing into the outstretched arms of their father were the little daughters of the one married man of the relief expedition. In a few moments more the deck was covered with little groups of the friends and kindred of the returned voyagers. Mothers had their boys, sisters their brothers in fond embrace, overflowing with thankfulness for their safe return.

Lieut. and Mrs. Peary and Professor Heilprin had stationed themselves aft, and the visitors crowded around them with enthusiastic greeting.

Meanwhile the police tug *Stokley* had been made fast to the port side of the *Kite*, and thus escorted, the gallant little vessel continued her triumphant journey up the

DR. F. A. COOK.

river. Noisy as was the welcome, the *Kite* bravely gave back sound for sound. Every vessel that passed saluted. Boat-whistles shrieked and tooted, fog-horns were blown and colors dipped. On the shores locomotives and factory whistles joined the din, cannon boomed, sky-rockets hissed and exploded, and the thousands of people who blackened the wharves filled the air with their hurrah.

At length Pier 46 was reached, and here the excitement which followed the meeting of the tug-boats below Lincoln Park was renewed. A large crowd of welcoming friends who could not be accommodated on the tug were there waiting, and scarcely had the *Kite* been made fast to the wharf when her deck was overrun by an enthusiastic multitude. Every detail of the *Kite's* appointments seemed of interest to them, they swarmed into her little saloon, peeped into the forecastle; her singular feature, the crow's nest, was an object of universal attraction, while Captain Pike was simply overwhelmed with attentions. Then there were Arctic costumes and the numerous other curiosities and trophies to be inspected, and items of news to be exchanged. Each member of the party had his own interested audience eager to gather every possible detail of his late experiences, and it was not until far into the afternoon that the explorers were able to get ashore and speed away to their several homes.

On the evening of September 28, the Academy of Natural Sciences gave Lieut. and Mrs. Peary a reception, and included in the honor the other members of the academy's Greenland exploring expeditions and the members of the relief expedition.

The hall was handsomely decorated with palms and other plants, and here and there were trophies of the numerous expeditions of the academy. In a prominent position was placed the sled used by Lieut. Peary in his 1300-mile journey over the ice-cap to the northern

EIVARD ASTRUP.

coast. At the western end of the hall was a screen of palms, with the silk flag, carried by Lieut. Peary to Independence Bay, planted before it. Depending from a pillar was the American ensign carried by the *Kite* on the relief expedition. It bore these initials: "P. R. E."

Nearly 1200 people, representing every branch of professional and business life, crowded into the library hall, and when Lieut. and Mrs. Peary reached the academy, they were met by Dr. Samuel G. Dixon, Chairman of the Sub-committee of the Reception Committee.

Dr. Dixon presented Mrs. Peary with a beautiful bunch of American Beauty roses. She was then presented to General I. J. Wistar, the president of the academy. General Wistar escorted Mrs. Peary, followed by Professor J. B. Brinton and Dr. Dixon. Mr. Gavin W. Hart escorted Lieut. Peary, and other members of the Reception Committee followed with Professor Heilprin and members of the Peary Relief Expedition.

Arrived at the end of the hall the party was met by the lady members of the Reception Committee, with Lieut. Peary's mother, and Mrs. Diebitsch and Miss Diebitsch, Mrs. Peary's mother and sister.

Standing beneath the flag that had been unfurled to the breezes of Independence Bay on July 4, 1892, Lieut. Peary and his intrepid wife received the congratulations which were showered upon them. Lieut. Peary wore the full dress uniform of his rank, and

accepted the compliments with becoming modesty. But Mrs. Peary, in a gown of brocaded black satin, with feather and lace trimmings, was the cynosure for all eyes. She carried the bunch of roses given her by Dr. Dixon and was radiant with smiles, looking the picture of health and happiness.

It was a most brilliant entertainment, a fitting close to the most successful of the many exploring expeditions into Arctic seas which have gone out under the auspices of the Academy of Natural Sciences.

APPENDIX I.

THE PEARY-VERHOEFF CORRESPONDENCE,

AND OTHER MATTERS RELATING TO

JOHN M. VERHOEFF, THE MISSING MEMBER OF THE PEARY NORTH GREENLAND EXPEDITION.

AMONG the first to approach Lieut. Peary when the *Kite* had landed at her wharf at Philadelphia was Miss Mattie Verhoeff, the sister of John M. Verhoeff, the missing mineralogist of the North Greenland Expedition. When Lieut. Peary saw her approaching, he took off his hat and bowed. In a moment Miss Verhoeff had made her way to where the Lieutenant stood, and said :

"Lieutenant Peary, I want to ask you what has become of my brother?"

"I am sorry to say," replied the Lieutenant, "that he is not on board the vessel. He did not return with us."

"But where is he?" asked the young lady. She was very much excited and spoke in a dramatic manner. Her relatives made an effort to soothe her, but Miss Verhoeff was determined to pursue her inquiry. The Lieutenant gravely expressed his sorrow at the young man's absence.

"Is that all you can say to me?" inquired Miss Verhoeff, her voice quivering.

At this point her relatives spoke to her, assuring her that everything that could be had been done for her brother's safety, and suggested that a private interview might be much more satisfactory to her. After some moments Miss Verhoeff was quieted, and consented to arrange for a later interview with Lieut. Peary that afternoon.

The regret over the probable loss of the young man —the only distressing feature of the entire expedition, from its setting out in 1891 to its triumphant return—is profound and universal, as is only natural, and it is heightened by the expressed belief of some of the returning explorers of the possibility that he is still among the living. The opinion has even been expressed that the missing man had purposely absented himself when the time came for the departure of his companions. The basis for this belief is very slight, but in view of the general interest in the case, it has been considered advisable to state it as far as can be.

It has indeed been hinted, on what foundation of fact may not be known, that Mr. Verhoeff was dissatisfied with the part assigned to him in the expedition. The fact of his not having been invited to accompany Lieut. Peary on his overland journey is said to have been a sore disappointment to him. It is alleged that he had determined to remain behind and carry on an exploration on his own account, and fearing that he would be forced

to accompany the expedition homeward, and his purpose thus be frustrated, he kept himself in concealment until it had sailed. These are, however, mere matters of rumor and conjecture.*

All that can be substantiated is that Mr. Verhoeff did inquire of one or more of the party whether it was likely that Lieut. Peary would permit any of the members of the expedition to stay if they chose to do so, and had received the reply that under no circumstances would the commander consent to such a proposal. It seems also that Mr. Verhoeff was constantly practicing to inure himself to the rigorous climate of North Greenland. In the first part of this volume the story is related how he swam from the vessel to the shore through icy water. When the *Kite* met the whaleboat containing Dr. Cook and Messrs. Gibson and Verhoeff at the entrance to McCormick Bay, the latter was the only one of the three who was not dressed in the seal- and reindeer-skin clothing supposed to be indispensable in the high Arctic regions. Readers of this volume will also recall his feat of successfully crossing the dangerous glacier at the head of McCormick Bay in midwinter. It is also recounted by his companions that he sought to accustom himself to Eskimo ways of living, and that he was the only member of the expedition who succeeded in overcoming a white man's repugnance against Arctic diet.

* Mr. Verhoeff, from all accounts, seemed perfectly content and much interested in his work as mineralogist and meteorologist, and manifested no anxiety to be one of the party on the trip across the inland ice.

Other instances of his determined energy and a characteristic tenacity of purpose in overcoming obstacles are cited by a gentleman who was his intimate at Yale College.

"John M. Verhoeff," says this informant, "was the most determined chap I ever saw. His nature would brook no obstacle in the way of anything he made up his mind to do. Physically he was splendidly equipped for any hardship. He was one of the strongest fellows who ever attended Yale, and was in perfect training all the time. At running, jumping, wrestling, boxing, or any pursuit which involved great strength of body and pluck he was among the first.

"Mentally, too, he was a genius. He was always busying himself with some difficult problem, and the boys at college all thought he was beyond the ordinary in intelligence. He was popular, although very peculiar and in some respects eccentric.

"I will give you a few instances which show how determined he was, and how he would do what he set out to do, no matter what happened to prevent. On one occasion he started from New London to ride to Louisville on his bicycle. He was one of the best long-distance riders this country ever turned out. No one heard of him for a month. Then his uncle in Louisville received a letter from him dated from some hamlet in Virginia. Subsequent inquiries developed that he was set upon by a huge bulldog while leaning over a pump in the yard of a farm-house and torn up by the

animal in terrible fashion. He had lain down there for two weeks unable to write. When he was able to travel he finished the journey.

"One of the best instances of Verhoeff's determination was one winter while he was at college. He was one of a number of boys that lived in a high three-story house near a cut in the railroad. During the blizzard in March, 1888, the snow had drifted in this cut until it was as high as the roof of the house. Verhoeff made a wager that he could jump into the drift and make his way out alone. It was accepted, and he plunged out of sight in the soft snow. He was under so long that the boys thought he must be smothered, and, after hard work, they dug him out. Verhoeff was the most highly enraged man when rescued you ever saw. He said he could have accomplished what he tried to do if he had been let alone. He was determined to perform the feat, but his companions would not allow it. By the next day the snow had blown out of the cut, and Verhoeff was denied the pleasure of accomplishing his daring exploit."

No attempt is made in this place to draw any conclusions or do more than state the facts known and opinions expressed which may help explain the feeling of those who believe the young man to be still alive. The story of the search for the missing member of the party is related fully in its appropriate chapter in the body of this volume. After the search was given up, a certificate was drawn up and signed by Captain Pike and

the first officer of the *Kite*, which has been reproduced and is given herewith.

At the conclusion of her interview with Lieut. Peary, on which occasion the young lady was accompanied by her uncle, the Rev. A. W. Keigwin, Miss Verhoeff assured Lieut. Peary that she was satisfied that everything had been done that was in their power, both by his own party and the party of Prof. Heilprin, to find her missing brother. The same assurance was given by her uncle.

Both of them, however, persist in their belief that Verhoeff is still alive, and regard the proofs of his death as inconclusive.

The Rev. Mr. Keigwin, when spoken to on the subject shortly after the meeting, said :

"I was very much impressed with my interview with Lieut. Peary, and am convinced that he did all that was in human power to find Verhoeff; and while he believed that he was lost, yet being aware that there were members of the party who thought otherwise, he gave the case the benefit of the doubt, and left ample provisions for his subsistence for eighteen months.

"As he expressed it, 'there was one chance in a thousand that he might be alive,' and he acted as if that one chance might fall to Verhoeff.

"Lieut. Peary said that Mr. Verhoeff was one of the most conscientious men he had ever known, and, knowing him as such, thought that if it had been his intention to have remained behind in the Arctic regions he would have told him or some of the party, and thus

roduced

. Peary,
nied by
assured
ing had
his own
missing
er uncle.
lief that
his death

the sub-

iew with
that was
believed
ere mem-
gave the
provisions

in a thou-
f that one

one of the
nd, know-
his inten-
regions he
and thus

CERTIFICATE OF SEARCH FOR VERHOEFF.

We the undersigned Master and Chief officer of S S Kite on the Peary relief Expedition to Mc Cormick Bay North Greenland can testify as to the Search of Mr Verhoeff after he was missing that for five Successive days both the Peary & Heilprins Parties Mc Cormick Bay it Glaciers & Surroundings also Robertsons Bay its Valleys & Glaciers found traces of his foot prints & other marks which led to a Glacier where they when lost we are confident in saying that there could not possibly more done in the Search for the Missing Man

Richd Pike Master
S S Kite
Edward Murphy
Chief officer
S. S. Kite

Mc Cormick Bay
Augt 24/92

spared them the trouble of the search. He acknowledged that several members of the party had told him that Verhoeff had inquired the probability of Peary allowing any of the party who wished to to remain in Greenland. Every one of them told Verhoeff that they thought that Peary would under no consideration permit it.

"He asserted that Verhoeff was the only member of the party who was capable of making meteorological investigations at Red Cliff House in a scientific and satisfactory manner, and that he had left him behind when he had gone on the northern expedition on that account."

The following interesting letter was sent by Mr. Verhoeff's uncle to the author at the moment of going to press:

DR. R. N. KEELY, JR.

Dear Sir:—Enclosed please find all the letters that we have of Verhoeff, with a letter to you personally from Miss V.

Verhoeff was not "rash" or "foolhardy." He carefully worked himself up to points that would be to others rash to undertake. But he had a very large amount of caution, and *never failed*, because he knew perfectly well what he could accomplish and what to leave.

I suppose you will say something about his remaining in Greenland. We do not ask you to take our view, but we ask you to consider our reasons for holding it, and then state your own, based on a fair consideration.*

* The author does not feel called upon to discuss this question. It seems quite sufficient to him to present the views of Mr. Verhoeff's relatives, as given in the above clear and forceful letter.

R. N. K., Jr.

It may involve a great deal to V. whether he is believed dead or alive :

First.—We do not wish the public to think that he played an unmanly trick in hiding out. It would not be fair to the party if he had done so without overwhelming reasons.

Second.—It may be necessary to send an expedition for him. Of course we could not do so alone, and the belief that he is dead would stand in the way of securing funds.

Third.—I am confident that if his life is spared, he will settle forever the Arctic problem, and I do not want his report invalidated by any wrong impressions of his character. He was never known to tell a falsehood from earliest childhood. He was very conscientious. He was fair in all his dealings. He had two eccentricities (the only two I know of). He would never accept a favor. He would visit nowhere, because he always wanted to pay his way, and pay for everything he received.

Fourth.—He never seemed to think that it made any difference to any one where he was. He would go and come without informing any one of his movements. Knowing him, as we do, we know that this was due to a self-depreciation and modesty that was native to his character. He never boasted of any achievement, and never seemed to care whether any one praised or blamed him. He rarely spoke of himself.

Now for the reasons pro and con for believing him dead. The only reason in favor of this belief is he was not found.

1. The footsteps seen were far from any dangerous point, and cannot be considered; besides the evident haste of the leader of the relief expedition to return would discount any such evidence. Now put against this Verhoeff's life-long desire to go as far north as possible; his years of preparation and his being left in camp when Lieut. Peary went north.

2. His efforts from the first to adapt his life to the customs of the natives.

3. His asking if any one would be allowed to remain when the party returned.

4. His original notification to Lieut. Peary, that he would get to Greenland if he had to go on a whaler.

5. His apparent indifference about going north *with the commander* of the expedition. No one of the party heard him complain that he was left behind.

6. His returning after five hours' absence to quiet Gibson's apprehensions, in case he failed to return for four or five days.

7. His leaving his trunk unlocked when he went on the expedition to Inglefield Gulf with Lieut. Peary.

8. His keeping with him (probably secreting near the Red Cliff camp) every memorandum book, all original memoranda of observations of temperatures, tides, etc.; all his instruments that were in good condition, and leaving only those broken or damaged.

9. His leaving in his room at Red Cliff only the clothing that was absolutely worthless, and hiding out several suits that were good, together with all his underwear.

These reasons, taken in connection with his thorough athletic training and his character already mentioned (which makes him an ideal explorer, thoroughly indifferent to hardship, and, if you please, indifferent as to the time of his absence), make the probability of his being alive at the time the *Kite* sailed overwhelming; even make it a certainty.

There will be a difference of opinion, of course, as to whether he was justified in his conduct. One thing must be considered. He did his work well and faithfully to the day when the expedition closed its explorations. He certainly was excusable if he declined to grace the triumphal procession on its return. He made no contract to return with the party. It is only a presumption that *any one would wish* to return. *He did not* wish to, and, as a free man, had a right to remain. Four members of the party gave their opinion that the leader would *compel* all the members to return with him. V. disputed his right to do so and took the only way to prevent an arbitrary act by hiding out. I think every intelligent and high-minded American will justify him in what he did.

Respectfully yours,

Wilmington, Del., Oct. 6, 1892. A. N. KEIGWIN.

WILMINGTON, DEL., Oct. 12, '92.

DR. KEELY.

Dear Sir:—Your request for photograph was received per mail. Yesterday the only copy in our possession

was forwarded to you. It is the copy found in Verhoeff's trunk when it came back to us from Greenland, and we prize it very highly on that account. But we could not have sent one, if we had not taken this, without great delay, as other copies would have to come from New Haven or Louisville. May I ask that it be cared for and returned when you are through with it.

Yours respectfully,

A. N. KEIGWIN.

THE VERHOEFF-PEARY CORRESPONDENCE.

434 GOLDEN GATE AVE.,
SAN FRANCISCO, CAL., March 16, 1891.

LIEUT. ROB'T E. PEARY, Philadelphia, Pa.

Dear Sir:—Yesterday I read in the Tacoma *Weekly News* the announcement of your proposed attempt to reach the Pole. Would like to accompany you, fully realizing that the chances may be nine out of ten that I would never return.

Am unmarried, twenty-five years of age, and no one dependent on me for support. If you decide not to have me with you, do not take the trouble to answer, but treat this letter as confidential, though you may have received many others similar.

However, if you think favorably you can take the time to read the remainder of the letter, which treats of my qualifications.

Yours respectfully,

(Signed) JNO. M. VERHOEFF.

434 Golden Gate Ave.,
San Francisco, Cal., April 13, '91.

Lieut. Rob't E. Peary, U. S. Navy Yard,
Philadelphia, Pa.

Dear Sir: — Your letter of the fourth * just received.

Would expect no return except the knowledge and experience which I would gain and for which I have long had a desire.

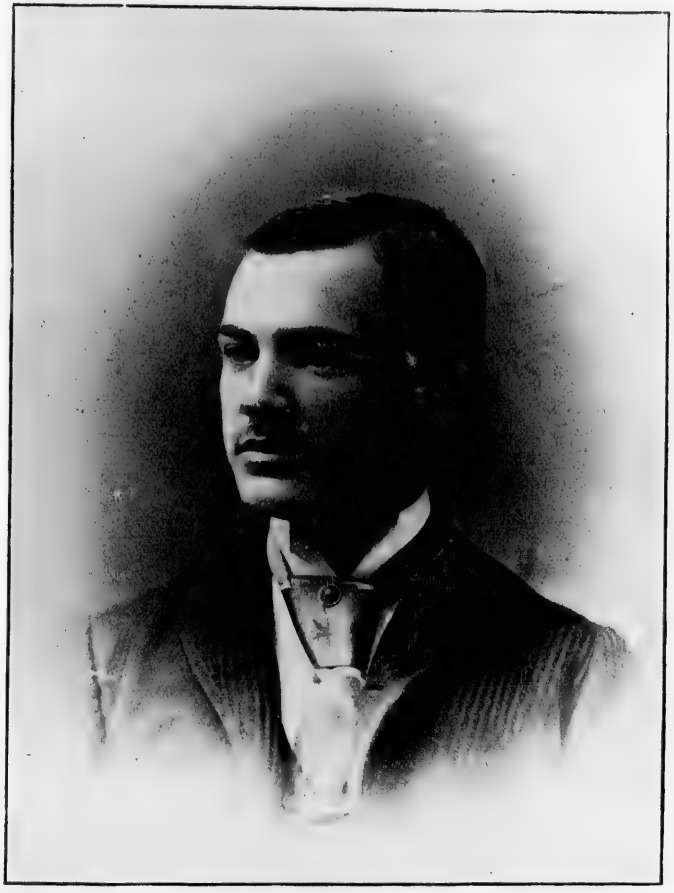
Have for some time thought of going in a whaler to the northern regions as a preparation, though I have not as yet done so.

Can go several days without nourishment and can endure as severe cold as an average man. As an instance, December 1, 1890, at Portland, Or., I swam across the Willamette River and back in sixteen and a half minutes, the temperature of the water being 7° C. or 44½° F. Have usually had good habits and can abstain from the use of liquors and tobacco.

Spent several years at an eastern university, and think I could be of material assistance to you in your trigonometrical calculations and determination of minerals by blowpipe analysis.

Can walk forty miles per day on an average road, and have walked sixty; find no trouble sleeping out of doors. Can do as much manual labor as an average man, but my height, five feet four inches, and youthful appearance usually belie me.

*Mr. Verhoeff's relatives have thus far been unable to discover this letter.



JOHN M. VERHOEFF.

If you are willing that I should go, would expect to occupy the position of a subordinate to a superior officer.

If, as the paper says, you start in May, there will be little time to settle business matters and prepare, so if you decide favorably please telegraph at my expense.

Respectfully,

(Signed) JNO. M. VERHOEFF.

---

434 GOLDEN GATE AVE.

SAN FRANCISCO, CAL., April 14, 1891.

LIEUT. ROB'T E. PEARY, U. S. Navy Yard,

Philadelphia, Pa.

Dear Sir:—Your letter of the seventh* received.

Would say that I should anticipate no return except the experience which I would gain, and for which I have long had a desire, as stated in my first letter.

The sum I offered to help defray the expenses of the trip will, I think, show my desire for an opportunity of reaching the northern coast of Greenland and my good faith, and would defray the extra expenses of the supplies.

The money was not offered simply for the privilege of being a member of your party, though I have that desire, and I would retract the offer and would not wish to go if it was used for any other purpose.

Respectfully,

(Signed) JOHN M. VERHOEFF.

*This letter is also missing from the correspondence and could not be found.

The next two following are copies of telegrams received by Verhoeff from Lieut. Peary:

[Dated League Island Navy Yard.]

To JNO. M. VERHOEFF, April 20, 1891.

434 G. G. Ave., San Francisco, Cal.

If you join party and contribute two thousand dollars, can charter special vessel to Whale Sound. Full credit will be given your assistance. If satisfactory, wire Eastern references.

(Signed) R. E. PEARY.

[Dated New Bedford, Mass.]

To JNO. M. VERHOEFF, 740 Second St., Louisville, Ky.

Expedition sails from New York about June 5. I shall be in New York after May 3.

(Signed) R. E. PEARY.

PHILA. ACADEMY OF NATURAL SCIENCES,
LOGAN SQUARE, May 3, 1891.

JNO. M. VERHOEFF.

Dear Sir:—Your letters and telegrams are all safely to hand, and I think everything is satisfactory, if one point is clearly understood by you, namely, that your contribution, generous as it is, cannot entitle you to any share in the management or control of the expedition. This must, in the very nature of the case, rest absolutely with me.

As I wired you, your assistance will receive all credit, and I shall endeavor to make things pleasant for you.

If, as I gather from your letters, your specialty is mineralogy, I shall assign the study of that branch, and perhaps geology, to you.

The members of the party will all be young like yourself, students and enthusiasts; and not one, with the exception of my colored man, that I would hesitate to accept as a companion in every sense of the word.

I do not know how familiar you may be with the details of the project, but the enclosed clippings will post you.

I think you need anticipate little or no personal risk, but you can look forward to any amount of hard work. I do not think of any special preparations that you need to make before coming East.

I would suggest your blowpipe outfit, and such items of traveler's outfit as you may desire to provide for yourself. Personal outfit will cost you some $50; this you can obtain here. All other outfit will be furnished, including rifle, hunting knife, oilskins, rubber blankets, sleeping bags, etc., etc.

The expedition will start about the first of June. A week will be ample time for your preparations here, unless you wish to see something of this part of the country.

I will ask you to send me, at your earliest convenience (as a part of the records of the party), a cabinet-size bust photo of yourself, that you would not object to be published; a physician's certificate as to your physical soundness, and two or three first-class references.

When you come East, I would suggest either the Astor House, New York, or the Lafayette Hotel, Philadelphia, as a point of arrival.

If you wire me when you will arrive at either one, I will meet you there.

Very truly,

(Signed) R. E. PEARY, U. S. N.

OFFICIAL ORDERS.

NORTH GREENLAND EXPEDITION OF 1891–'92.

R. E. PEARY, U. S. Navy.

RED CLIFF HOUSE,

NORTH GREENLAND, August 11, 1891.

Sir:—You are hereby designated as Mineralogist and Meteorologist of the North Greenland Expedition of 1891–'92, and in this capacity you will make every effort to obtain all the specimens and strata necessary to make your work of lasting scientific value.

You will report to me monthly in writing the results of your work.

Very respectfully,

(Signed) R. E. PEARY,

Commanding Expedition.

JNO. M. VERHOEFF.

RED CLIFF HOUSE,

NORTH GREENLAND, August 12, 1891.

Sir:—During the absence of the boat expedition you will make as complete a mineralogical and topographical

examination of localities visited as possible and, whenever practicable, obtain with compass and aneroid a careful vertical cross section normal to the shore extending from the water level to the crest of the cliffs.

You will also keep a general record of the weather and on your return submit the same to me, together with your cross sections and a written report of your work.

Very respectfully,

(Signed) R. E. PEARY,
Commanding N. Greenland Expedition.

JNO. M. VERHOEFF.

APPENDIX II.

LIEUT. PEARY'S REPORT.

THE SCIENTIFIC RESULTS OF THE EXPEDITION.—IMPORTANT CONCLUSIONS DEDUCED FROM DATA AND OBSERVATIONS.—A REVIEW OF PREVIOUS ARCTIC EXPLORATION.

AT the regular meeting of the Academy of Natural Sciences on Tuesday evening, November 1, 1892, Lieut. Peary presented his official report upon the North Greenland Expedition of 1891–'92.

After the preliminary business of the meeting had been transacted, Lieut. Peary was announced and greeted with applause as he arose.

He began with a brief resumé of the incidents of the voyage of the *Kite* from Brooklyn, whence she sailed on June 6, 1891, until July 29, when she steamed away from McCormick Bay.

"Unfortunately," said the explorer, "I broke my leg, rendering it useless for a long time. Thus helpless, I was carried ashore at McCormick Bay on July 27, 1891. Strapped to a plank I was taken to a point where I could superintend the construction of winter quarters. These were in native fashion, of course, with snow foundation and a single entrance for door, window and every outlet.

"By August 12, the house which was to shelter the party was about completed. From this time until October 26, when the long winter night began, several short expeditions were made by various members of the party in order to obtain provisions and other supplies. One of these, led by Gibson, was to the "looneries" of Hakluyt Island, where a large number of birds were secured. He was also commissioned to visit the Nehelumie settlement and induce one of the natives to return with him to McCormick Bay, it being supposed that the assistance of an Eskimo hunter would be invaluable in the chase of the game peculiar to this region.

"There were also seal, deer and walrus hunts and reconnoissances of the neighborhood. A total of thirty-one deer were secured before the sun disappeared."

The futile attempts of Astrup, Gibson and Verhoeff to establish an autumn advance depot of supplies at the southeast angle of Humboldt Glacier, which were prevented by the condition of the snow, received brief notice.

"Red Cliff House," said Lieut. Peary, "was at a point within half a degree, or thirty miles, of the latitude where the *Jeannette* foundered and sank.

"Our situation there during that long and dark winter was comfortable; in fact, very enjoyable. When I arose in the morning the first thing that reached my ears was a laugh. The last thing heard in the evening when all lay down to sleep, except the watcher whose duty it was to guard us, was a laugh. Our amusements

were not merely such as conversation and crude recreation could supply. The natives visited us, and we learned instructive and amusing things without end as to their way of life and pursuit. Thanksgiving and Christmas were properly observed, so that the time passed pleasantly and quickly.

"About the middle of February the sun returned, accompanied by a storm of wind and rain. Hunting parties were again organized in March, and ten more deer obtained. An epidemic of the grippe attacked the party during this month, and several of the natives suffered also.

"On April 18 we started for a round of visits among our neighbors. I can say that every member of the tribes up there is a personal friend and acquaintance of mine. The happy disposition of the people, their frankness and good nature, and the happy incidents connected with the visits we paid them, kept us in constant good humor.

"In this itinerary, in which Mrs. Peary accompanied me, we explored the recesses of Inglefield Gulf. Over thirty glaciers, ten of them of the first magnitude, were discovered and named."

In commenting on this, the report says that it is doubtful whether any other known region shows glacial phenomena in such magnitude and variety.

The report recounts the difficulty of transporting the supplies for the proposed journey northward to the edge of the true inland ice, fifteen miles away. Verhoeff, the

report said, was left at Red Cliff House to continue his meteorological and tidal observations, in which he had become very much interested. The true inland ice was not reached until May 14, and the actual start on the same northward was not made until May 15.

The course and the events of the journey were then briefly described. The return journey over the inland ice was resumed on July 8. For two weeks its direction lay over the great central ice plateau, at an average elevation of about 8000 feet, cloud-capped and deep with snow.

"At last, on August 5," continued Lieut. Peary, "in coming over the profile of a towering snow mound, I came upon Professor Heilprin and the relief party. To this day it remains a mystery to me how he and they were able to get as far as they did unprovided with the snow-shoes and implements we possessed."

The report then continued :

"The scientific results of the expedition may be briefly summarized as follows :—Among the geographical results may be mentioned the delineation of the unknown shores of Inglefield Gulf and the imperfectly known shores of Whale Sound, the delineation of the northern extension of the great Greenland ice-cap and the determination of the northern limit of the main Greenland mass ; the existence of detached ice-free land-masses of less extent to the northward ; the rapid convergence of the Greenland shores above the seventy-eighth parallel ; the determination of the relief of an

exceptionally large area of the inland ice, and the discovery of a large number of glaciers of the first magnitude.

"The geological results are comprised in the addition to our knowledge of the inland ice, furnishing valuable data to our understanding of the great ice age, and the large series of views showing the physical characteristics of the ice-free land both in the north and about Whale Sound and Inglefield Gulf, which will be placed in the hands of the academy.

"The results of the ethnological, mineralogical, botanical, ornithological and meteorological investigations and tidal observations are also commended to the academy.

"To Verhoeff, the intrepid young man who contributed so liberally of his means to the financial success of the expedition, is due an unstinted measure of praise, not only for his generous financial assistance to the enterprise, but for his absorbing interest and painstaking work in the field of meteorological and tidal observations entrusted to him.

"The meteorological and tidal observations taken by Verhoeff are among the most complete ever taken in the Arctic regions, and transcend, I am persuaded, in result and real value the record of any previous work in this line. You are all familiar with some of the circumstances connected with his taking off. On the very morning of his disappearance we set out on his track. The scientific specimens he had gathered in his walk were found by us, and he was traced by his footsteps to

the edge of a cleft in a towering glacier. Then he was given up after careful search in every direction made further effort futile.

"Referring to the ethnological results, Dr. Cook has secured a complete census of the Smith Sound Eskimos, with important data and photographs of seventy-five of them. This material will, I feel, contribute greatly to answering, and perhaps answer, the question, 'Whence came this people?' The many and valuable trophies he collected will, in due time, form part of the academy collection.

"To Astrup, my companion on the inland journey, is due a special debt of gratitude. A boy in appearance and hardly more than a boy in years, he showed the grit and had the endurance of a man, and his happy disposition and cheerful alacrity were a never failing comfort on the long, tedious march across the ice.

"Gibson, our ornithologist, and my negro boy Matt had the commission to see that the party had enough to eat. This they accomplished with great credit to themselves. In this connection particular acknowledgment is due to Gibson, who was indeed the Nimrod of us all. Strong and active, nothing daunted him, and with equal courage he faced privation and personal risk.

"My boy Matt, who proved almost as expert in the use of the gun, merits high commendation when it is remembered that he belongs to a race supposed to be ill adapted for the endurance of extreme cold, and that when he went north with us he left behind a young bride.

"As general conclusions of the work of the expedition, I feel justified in stating that the inland ice of Greenland, between the seventy-eighth and eighty-second parallels, is identical in characteristics with the inland ice under the seventieth parallel, east of Disko Bay; that the great glaciers of the northern and north-western fiords have all the external features indicating resistless force and high velocity common to the glaciers of Disko Bay and Omenak Sound, as well as those of Inglefield Gulf; that under normal conditions the wind of the great ice-cap is always blowing from the interior outward and downward perpendicular to the general trend of the coast; that the agency of the wind, ceaselessly hurrying the snow from the interior to the coast land ribbon, where it can melt, must now be placed on a par with the agency of glacial evaporation and sub-glacial liquefaction in all discussions as to the causes which tend to balance the annual precipitation and prevent the rapid increase of the interior ice-cap.

"In regard to the methods, equipments and other questions bearing upon future Arctic work, in my opinion the North Greenland Expedition has shown that an itinerary of a journey upon the inland ice may be followed with nearly the precision with which freight trains are run on railroads, and Professor Heilprin's voyage shows that the length of the trip from here to Whale Sound can be calculated almost to a day. Further, it has been demonstrated that two or three

well-equipped men can command any part of the coast of Greenland from the interior."

A Review of Previous Arctic Expeditions.

Of the value and importance of polar exploration, there can now be no question, although the popular notion that its object should be the attaining of the highest possible point, or even of the North Pole itself, is wide of the mark. Its true objects are scientific, the observations of meteorological and magnetic phenomena, and geographical, hydrographic, geological and ethnological studies. The ascertaining of the exact location and the period and range of oscillation of the magnetic Pole is a matter of superlative importance; the geographical North Pole has, for science, no greater significance than any other point on the earth's surface. The chimera of an open Polar Sea beyond the ice-barrier has long since lost the few believers in it which it ever had, and the ambition to reach this mythical sea, and the pure spirit of adventure which has made "a dash upon the Pole" its ultimate object, have long ceased to be the motives of the undertakers of explorations into Arctic regions.

Indeed, these motives, which have played so important a part in the polar enterprises of the present century, were altogether foreign to and unknown to the earlier explorers.

Passing the abortive attempts in the tenth century of our era, of that turbulent barbarian, Eric the Red, at establishing colonies in Greenland, without enlarging

upon the half-mythical voyages of the Norsemen from Iceland to the coasts of North America, or the still deeper mystery of the voyage in the fourteenth century of Niccoló Zeno, a Venetian nobleman, into the north seas, the first authentic Arctic explorations were born of the commercial needs of the northern maritime nations —the Dutch, the Danes, and above all, of the English. The voyages of the earlier discoverers of the sixteenth and seventeenth centuries, of Davis, of Hudson, of Baffin, and many others, were all undertaken primarily in the interest of commerce.

When it was found that the American continent lay stretched, an unbroken barrier, in the way of a westering course to the coveted Indies, and the two gateways thither, the one around the Cape of Good Hope and the other through the Strait of Magellan, were barred and jealously guarded by the Portuguese on the one hand and the Spaniards on the other, it became a matter of the highest moment to the other commercial powers of Europe to find a way around the obstructing continent of America which might be used free of Spanish or Portugese interference. To seek such a one in a northwesterly direction was the most obvious solution.

The voyages of Frobisher in 1576 and 1578 established the fact that there were two or more wide openings on the American coast, leading westward, between latitudes 60° and 63°, but what he supposed to have been a part of the "Engronelant," or Greenland, of the map of Niccoló Zeno, and what he called "Meta Incognita,"

was really a part of the western shore of the North American continent. Greenland he certainly never saw.

John Davis, who made the next attempt to discover a northwesterly passage, was one of the most scientific seamen of his time. He made three voyages in three successive years, aided and fitted out by William Sanderson and other merchants. Sailing from Dartmouth the seventh of June, 1585, he was the first to visit the west coast of Greenland subsequent to the abandonment of the Norse colonies. He called it the "Land of Desolation." He discovered Gilbert's Sound (where now stands the Danish settlement of Godthaab), and then crossing the strait which bears his name he traced a portion of America's western shore. In his second voyage Davis noted what he calls "a furious overfall," which was the tide flowing into Hudson's Strait; and in his third voyage, in 1587, he advanced far up his own strait and reached a lofty granite island in 72° 41′ N., which he named Sanderson's Hope. He considered that there was no good hope of advancing farther, and reported "no ice towards the north, but a great sea, free, large, very salt and blue, and of an unsearchable depth." He found it impossible to reconcile his discoveries with the reports of Frobisher and the Zeno map, and in 1595 he published a tract, entitled "The World's Hydrographical Description," in which he ably states the argument in favor of a northwest passage.

The English enterprises were continued by the Muscovy Company and by associations of patriotic merchants

of London, and under the auspices of the former notable work in polar discovery was done by Henry Hudson. On his first voyage, in 1607, he discovered the until recently most northern known point of the east coast of Greenland in 73° N., named "Hold with Hope," and examined the edge of the ice between the latter coast and Spitzbergen, reaching a latitude of 80° 23′ N., and on his way home he discovered the island now known as Jan Mayen. In his second voyage, undertaken in 1608, he made further examinations of the edge of the ice between Spitzbergen and Nova Zembla. In his third voyage, in the employ of the Dutch East India Company, he discovered the Hudson River, and in 1610 discovered Hudson's Strait and the great bay which bears his name.

At about the same period the Danish kings began to send expeditions for the re-discovery of the lost Greenland colony. Christian IV. in 1605 sent three ships under the Englishmen, Cunningham and Hall, and a Dane named Lindenov, which reached the western coast of Greenland and had much intercourse with the Eskimos. Other vessels followed in 1606–1607.

After several expeditions of minor importance, one of which, despatched under Sir Thomas Button in command of the *Resolution* and the *Discovery*, in 1612 wintered on the west shores of Hudson Bay, Robert Bylot as master, with William Baffin as pilot and navigator, set out in 1616 in the *Discovery*. Sailing up Davis' Strait they passed that navigator's farthest point at Sanderson's Hope, and sailed round the great channel, with

smaller channels leading out of it, which has been known ever since as Baffin's Bay. Baffin named the most northern opening Smith Sound, after the first Governor of the East India Company and munificent promoter of the expedition, Sir Thomas Smith. He discovered and charted Wostenholme Sound, and Hakluyt Island in the regions near and above Cape York, and the Cary Islands and Lancaster Sound and Jones Sound, leading westward out of Baffin's Bay. It may be mentioned as an illustration of the value of these early voyages to modern science that Professor Hansteen, of Christiana, made use of Baffin's observations in the compilation of his magnetic maps.

For a period of two centuries, with the exception of the establishment of the modern Danish settlements in West and South Greenland, there was no enterprise of importance into these waters. This was due mainly to the fact that the decadence of Spain and Portugal, and the increasing naval strength of the Dutch, and later of the English, shortly brought about the opening of the routes by way of the Strait of Magellan and the Cape of Good Hope to the commerce of the world, and made the seeking after a northwest passage a matter of minor importance. A great deal was accomplished in a northeasterly direction, however, especially by the Dutch, and between 1725 and 1741, by the command of Peter the Great, Emperor of Russia, Captain Vitus Bering, a Dane, made several voyages, sailing out of Okhotsk, in Northeastern Siberia, in which he dis-

covered the sea and strait which has ever since borne his name.

It was not till after the peace of 1815 that north polar research again found a powerful and indefatigable advocate in Sir John Barrow. Through his influence a law was enacted in 1818 by the British Parliament, by which a reward of £20,000 was offered for making the northwest passage, and of £5000 for reaching 89° N., while the Commissioners of Longitude were empowered to award proportionate sums to those who might achieve certain portions of such discoveries. In 1817 the Arctic Sea had been reported by Captain Scoresby unusually free from ice, and this caused the despatching of two expeditions the following year, the one by way of Spitzbergen, and the other by Baffin's Bay. To the first, in command of Captain David Buchanan, Sir John Franklin, then only Lieutenant Franklin, was attached. The two vessels of this expedition were severely nipped and were obliged to return.

The other expedition, also equipped with two vessels, the *Isabella* and the *Alexander*, under Captain John Ross and Lieutenant Parry, followed in the wake of Baffin's voyage of 1616, and is important mainly in that it confirmed the discoveries of that ancient mariner. Captain Ross thought the inlets reported by Baffin as leading out of his great bay were merely smaller indentations in the coast; his second in command, however, was convinced that Lancaster Sound led to a wider opening to the westward.

Parry was accordingly selected to command a new expedition the following year. Pushing westward through Lancaster Sound and its continuation—which he named Barrow Strait—with an archipelago on his starboard side, since known as Parry Islands, he observed a wide opening to the north, which he named Wellington Channel, and sailed on for 300 miles to Melville Island. Here he was stopped by that impenetrable polar pack of great thickness which seems to surround the archipelago to the north of the American continent. The expedition wintered on the south shore of Melville Island and returned in October, 1820. On May 8, 1821, another expedition under his command went out with the *Hecla* and the *Fury*. This company passed their first winter on the newly-discovered Melville Peninsula, and still persevering, they passed a second winter among the Eskimos at Igloolik in 69° 20′ N., discovered a channel leading westward from the head of Hudson's Bay, which Parry named Fury and Hecla Strait, and returned in the autumn of 1823.

Meanwhile Franklin had been employed in efforts to explore the northern coast of America, hitherto almost a *terra incognita*. In 1819 he went out accompanied by Dr. Richardson, George Back and Hood, landing at York Factory, whence they proceeded to Great Slave Lake. In August the following year they started for the Coppermine river, and embarking on it they reached its mouth on July 18, 1821. Over 500 miles of coast line were explored, as far as Cape Turnagain. On its

return journey, the party endured the most frightful suffering from cold and starvation, but eventually Franklin, Richardson and Back arrived safely at Fort Chippewyan.

In 1824 three combined attempts were organized. Parry again entering Lancaster Sound was to push down an opening he had seen, and called Prince Regent's Inlet; but he was unsuccessful. Beechey entered Behring Strait in the *Blossom*, and extended our knowledge of the north coast of the continent as far as Point Barrow. Franklin descended the Mackenzie River to its mouth, and explored the coast to the westward for 374 miles; while Dr. Richardson discovered the shore between the Mackenzie eastward to the mouth of the Coppermine and sighted land to the northward, which he named Wollaston Land, and called the dividing channel Union and Dolphin Strait. They returned in the autumn of 1826.

Parry's attempt to reach the Pole in 1827 from Spitzbergen, by means of sledge-boats, was useful only in proving that nothing could be done in the way of Arctic discovery by leaving the land and trusting to the drifting packs.

The tracing of the polar shores of North America was continued by Captain John Ross, who, accompanied by his nephew, James Ross, sailed in 1829 in the *Victory;* they passed three successive winters in the regions around the Gulf of Boothia, so named by them after Felix Booth, a wealthy distiller who furnished the

funds for the expedition. Their winter quarters was on the eastern side of the land, which they named Boothia Felix. In the course of excursions during the summer months, they crossed the land and discovered the position of the North magnetic Pole on the western side of it, on June 1, 1831. The Rosses could never get their little vessel out of its winter quarters, and were obliged to fall back on their stores on Fury Beach, where they spent a fourth winter, and were eventually picked up by a whaler in Barrow Strait. The servants of the Hudson's Bay Company finally completed the surveys of the northern coast of America.

In 1845, a fresh attempt was made by Sir John Franklin, in the *Erebus* and the *Terror*, to force a passage from Lancaster Sound to Behring Strait, with its well-known tragic ending. Of the story of this untoward event, and the numerous expeditions of search which it called forth, only the briefest outline of its most important points can be given. A few geographical details are necessary in order to understand clearly the nature of the obstacles which finally stopped the progress of the unhappy explorer, and which also prevented Sir Edward Parry from proceeding further on his first voyage. Westward of Melville and Baring Islands, northward of the western part of the American coast, and northward of Kennedy Channel, there is a vast unknown space, the ice which encumbers it never having been traversed by any ship. The floes with which it is packed are described by all navigators who have skirted its edge

as being of stupendous thickness and massive proportions.

This accumulation of ice, to which Sir George Nares has given the name of a "Paleocrystic Sea," arises from the absence of direct communication between this portion of the Arctic Ocean and the warmer waters of the Atlantic and Pacific. Behring Strait is the only vent in a southwesterly direction, and that channel is so shallow that the ice grounds outside of it. In other directions the channels leading to Baffin's Bay are narrow and tortuous. The heavy polar ice flows southeast between Melville and Baring Islands, down what is now called McClintock Channel, and impinges on the northwest coast of King William's Land, discovered by James Ross. It was this last named branch of the paleocrystic sea which finally stopped the progress of the Franklin expedition.

On leaving his winter quarters at Beechey Island in 1846, Franklin found a channel leading south, now called Peel Sound, running along the western shore of the land of North Somerset, discovered by Parry in 1819. If he could reach the channel on the American coast, he knew that he would be able to make his way along it to Behring Strait. He sailed south through Peel Sound towards King William's Land, with land on both sides. But directly he passed the southern point of the western land, and was no longer shielded by it, the great paleocrystic stream from Melville Island was fallen in with, pressing on King William's Land. It was impassable.

The only possibility of progress would have been by rounding the eastern side of King William's Land, now known to be an island, but whose insularity was then unknown.

When, in 1848, Franklin had still failed to return, anxiety began to be felt for the expedition, and James Ross was despatched to Lancaster Sound with two ships. He returned in the following year without any tidings. The alarm for the safety of the party now became general, and in May, 1850, Captain Austin was sent, in command of the *Assistance* and the *Resolute*, with two steam tenders, to renew the search by way of Barrow Strait. Two brigs, the *Lady Franklin* and *Sophia*, under the command of Penny, an able whaling captain, were sent by the same route. They were obliged to remain over winter, and made an exhaustive search, discovering Franklin's winter quarters on Beechey Island, but there was no record of any kind to indicate the direction taken by the ships.

In January, 1850, an expedition, under Collinson and McClure, in the *Enterprise* and the *Investigator*, had sailed from England to attempt to succor the missing explorers by way of Behring Strait. The ships accidentally parted company, and each continued what proved to be most remarkable voyages. On May 6, 1851, the *Enterprise*, with Collinson on board, passed the strait, and rounded Point Barrow on the 25th. Collinson then made his way up the narrow Prince of Wales Strait, between Baring and Prince Albert Islands

and reached Princess Royal Islands, where McClure had been the previous year. Returning southward, the *Enterprise* wintered in a sound in Prince Albert Island. Traveling parties were despatched in the spring of 1852, one of them reaching Melville Island. In September, 1852, the ship was free, and Collinson pressed eastward along the northeast of America, reaching Cambridge Bay, where a second winter was passed. In the spring he examined the shores of Victoria Land, and came to within a few miles of Point Victory, where the fate of Franklin would have been ascertained. The *Enterprise* again put to sea on August 5, 1853, and returned westward along the northern coast of America until she was stopped by ice, and obliged to pass a third winter at Camden Bay. In 1854 this most remarkable voyage was completed, and Captain Collinson brought the *Enterprise* back to England.

Meanwhile McClure in the *Investigator* had passed the winter 1850–'51 at the Princess Royal Islands, only thirty miles from Barrow Strait. In October McClure ascended a hill whence he could see the frozen surface of Barrow Strait navigated by Parry in 1819. It was impossible to reach it, for the same branch of the paleocrystic sea which stopped Franklin off King William's Land was athwart their northward course. So as soon as he was free, in 1850, McClure turned southward around the southern extreme of Baring Island, and commenced to force a passage to the northward between the western shore of that land and the enormous fields of ice

which pressed upon it. The cliffs rose up like walls on one side, while on the other the stupendous ice of the paleocrystic sea rose from the water to a level with the *Investigator*'s lower yards. After many hair-breadth escapes McClure took refuge in a bay on the northern shore of Banks' Land, which he named "The Bay of God's Mercy." There the *Investigator* remained, never to move again. After the winter of 1851–'52 McClure made a journey across the ice to Melville Island, and left a record at Parry's winter harbor. Abundant supplies of musk-oxen were fortunately found, but another winter had to be faced. In the spring of 1853 McClure was preparing to abandon the ship with all hands, and attempt, like Franklin's crews, to reach the northern coast of America. But succor providentially arrived in time.

In 1852 the British government resolved to send another expedition to proceed by Lancaster Sound. Austin's vessels, the *Assistance* and *Resolute*, and their steam tenders, the *Pioneer* and *Intrepid*, were recommissioned, and the *North Star* sent out as a depot ship. Sir Edward Belden commanded the *Assistance* and the *Pioneer* was under Sherard Osborn. These two proceded up Wellington Channel to Northumberland Bay, where they wintered. A second winter was passed by them lower down in Wellington Channel, and then, abandoning their ships, they returned home in 1854.

Captain Kellett commanded the other vessel, the *Resolute*, with McClintock in the steam tender *Intrepid*.

Among Kellett's officers were the best of Austin's sledge-travelers, McClintock, Mecham and Vesey Hamilton; George Nares, the future leader of the expedition of 1874–'75, was also on board the *Resolute*. Kellett passed onward to the westward and passed the winter of 1852–'53 at Melville Island. During the autumn Mecham discovered McClure's record at Parry's winter harbor, and the position of the *Investigator* was thus ascertained and the safety of her crew was assured; for it was only necessary to send a message across the strait between two fixed positions.

This service was performed by Lieut. Pim early in the following spring. The officers and crew of the *Investigator*, led by McClure, arrived safely on board the *Resolute* on June 17, 1853, and they reached England in the following year. They had not only discovered but traversed a northwest passage, though not in the same ship, and partly by traveling over the ice.

Up to this time the mystery of the fate of the Franklin party was unsolved. At last in 1854, Dr. Rae, returning from a journey up to King William's Land, in which he established it to be an island, brought home tidings and relics of Franklin which he had gathered from the Eskimos. This led to the expedition of McClintock in the *Fox*.

At the time the government of Great Britain was wholly taken up with Eastern affairs, and when the war was over, it was deemed useless to spend more money and risk more lives in what was regarded as a hopeless quest.

But Lady Franklin's pious devotion to the memory of her noble husband prompted her to make one last effort to ascertain his fate ; to this object she dedicated all her available means, aided, as she had been before, by the subscriptions of sympathizing friends. The little yacht *Fox* was purchased and fitted out, and under the command of the veteran Arctic voyager, Leopold McClintock, she sailed from Aberdeen, July, 1857.

The first winter was passed drifting around Baffin's Bay, locked fast in the floes, and it was not until the autumn of 1858 that the *Fox* was got into winter quarters at Port Kennedy, on Ballot Strait, between Boothia Felix and North Somerset. In the spring of 1859 sledging parties went out to search the coasts of King William's Island and the west coast of Boothia. The search was successful so far as ascertaining the fate of the expedition is concerned. From the Eskimos in Boothia many relics were obtained, and reports as to the fate of the ships and the men. All along the west and south coasts of King William's Island remains of articles belonging to the ships were discovered, and skeletons that told a terrible tale of disaster. Above all, in a cairn at Point Victory a record was discovered by Lieut. Hobson that briefly told the history of the expedition up to April 25, 1848. In 1845–'46 it had wintered at Beechey Island, on the southwest coast of North Devon, after having ascended Wellington Channel to latitude 77°, and returned by the west side of Cornwallis Island. The success of the first year's work, thus briefly stated,

was greater than any ever attained within a single season of Arctic service.

The record was written on one of the forms supplied by the admiralty to surveying vessels to be thrown overboard after the required data had been filled in. But upon the margin and around the printed form was an addendum dated April 25, 1848, after all hope of a successful termination of the enterprise was given up. It was in these words: "April 25, 1848. H. M. S. *Terror* and *Erebus* were deserted on 22 April, five leagues N. N. W. of this, having been beset since 12th September, 1846. The officers and crews, consisting of 105 souls, under the command of Captain F. R. M. Crozier, landed here in lat. 69° 37′ 42″ N., long. 98° 41′ W. Sir John Franklin died on the 11th June, 1847; and the total loss by death of the expedition has been up to this date 9 officers and 15 men." It was in the handwriting of Captain Fitzjames, to whose signature is appended that of Captain Crozier, who also adds the words of momentous significance: "Start on to-morrow, 26th April, 1848, for Back's Fish River."

A briefer record never told a more tragic story. All of the party had probably overrated their strength and their ability to reach the northern shores of the continent of America. Reduced by want of sufficient food and the effect of their winter's confinement in these regions, they had attempted to drag with them two boats, besides heavily-laden sledges, and doubtless were soon compelled to abandon a greater part of their burden.

One of the boats was found by McClintock near the middle of the west coast of King William's Island. It contained two skeletons. From the Eskimos it was learned that the men dropped down as they walked, and were frequently left unburied. There was no suspicion of foul play, although many relics of the retreating party were found in the possession of the Eskimos. From all that could be gathered it seems that one of the vessels was crushed in the ice, and the other stranded on the shores of King William's Island, where it lay for years a mine of wealth to the wild tribesmen. No trace of the vessels was found. This is all that is known of the fate of Franklin and his gallant men. Franklin is certainly entitled to the credit of having discovered the northwest passage, the point reached by him being within a few miles of that reached by earlier explorers from the westward.

The catastrophe of Sir John Franklin's expedition led to the discovery of 7000 miles of coast line and to the exploration of a vast extent of unknown country. It also afforded a warning which would render any similar disaster quite inexcusable. If arrangements are always carefully made for a retreat, if a depot ship is always left in reach of the advancing expedition on the one hand as well as of the outer world on the other, and if there is annual communication with positive rules for depositing records, no such catastrophe can ever happen again.

The American nation was first led to take an interest in polar enterprise through a very noble and generous

sympathy for Franklin and his brave companions. Mr. Grinnell, of New York, gave practical expression to this feeling by the equipment, in 1850, of two vessels, the *Advance* and the *Rescue*, commanded by Lieutenants DeHaven and Griffith, to aid in the search. Dr. Kane, of Philadelphia, accompanied the expedition as surgeon and naturalist, and wrote the narrative of the same, published in 1854, under the title "The U. S. Grinnell Expedition in Search of Dr. Franklin." The expedition reached Franklin's winter quarters on Beechey Island, but returned the same year without wintering there. Kane was determined not to give up the search, and all governmental aid being refused, in spite of feeble health, he traveled through the States lecturing in order to obtain funds, and gave up his pay for twenty months.

Finally Mr. Grinnell again came to the rescue with the brig *Advance*, which was equipped with the help of Mr. Peabody and the Academy of Natural Sciences, and in 1853 the expedition sailed with the purpose of exploring the unknown country bordering on Smith Sound, the northerly outlet of Baffin's Bay, and beyond. The *Advance* reached Smith Sound in August, 1853, and went into winter quarters on Rensselaer Bay. Interesting work was done in the following spring. The greatest of all glaciers, Humboldt Glacier, with a surface extending over sixty miles, was discovered, and Morton, one of the party, crossed its foot with a sled and a team of dogs, and attained a point beyond, near Cape

Constitution, in latitude 81° 22′ N. whence he saw to the northward open water.

This discovery, which was probably nothing more than a part of the sea beyond Kennedy Channel, and possibly what is now known as Hall Basin, temporarily clear of ice, was the origin of the myth of an "Open Polar Sea." The expedition was harassed by sickness and want of means, and after a second winter, during which scurvy attacked the whole party, notwithstanding the Eskimos, who proved true friends, furnished them with fresh meat, the *Advance* was abandoned May 17, 1855, and the party reached Upernavik on August 6. Lieut. Hartstene, who had been sent out to search for Kane, reached Van Rensselaer Bay after he had gone, but took the retreating crew on board on his return voyage.

Kane reached home in October and at once set about writing the narrative of his voyage, which was published in 1856. He died in Havana, February 16, 1857, only thirty-seven years of age, having certainly accomplished a prodigious amount of work in his short and restless life.

On July 10, 1860, an expedition left Boston, under the command of Dr. Hayes, in the schooner *United States*, for Smith Sound, with the object of following up the line of research begun by Dr. Kane. Dr. Hayes had been one of the companions of the former expedition. He wintered at Port Foulke, and in the following spring crossed the sound to the American shore in dog sledges, exploring the coast, without making any momentous discoveries, however.

The story of Charles Hall as an Arctic explorer, like that of many others, is most pathetic. A deep interest with the fate of Sir John Franklin first led him into the northern seas. In the first journey, 1860–'62, he discovered the remains of a stone house which Frobisher had built on the Countess of Warwick Island in 1578. In his second expedition, 1864–'69, Hall, by dint of the most unwearied perseverance, at length reached the line of retreat of the Franklin survivors, at Todd's Island and Pepper River, on the south coast of King William's Island. He heard the story of the wreck of one of the ships from the Eskimos. He was told that seven bodies were buried at Todd Island, and he brought home some bones which are believed to be those of Lieut. Le Vercomte, of the *Erebus*.

On July 3, 1871, he started from New London with the ill-starred expedition in the *Polaris*. Hall's own plans included a steamer, with a sailing vessel as support, and the means of maintaining occasional communication between himself and the civilized world wherever he might be. The necessity of keeping open communication in order to insure a retreat or make a rescue tolerably certain had been shown again and again, and was reluctantly abandoned when he found that Congress would give him but one vessel and only $50,000.

In respect, too, of the region selected for exploration his plans were completely modified. It had been intended by him to sail westward out of Baffin's Bay up Jones Sound, but the opinions of his friends, the Eskimos, and

the great interest attaching to Kane's experiences, induced him to change his purpose and to follow up the latter explorer's discoveries on Smith Sound. On the afternoon of August 27 the *Polaris* was opposite Cape Alexander and entered the sound. She was pushed forward rapidly, favored by comparatively open water, and on the evening following entered the narrow channel extending north in continuation of Smith's Sound, and since called Kennedy Channel. On the twenty-ninth they found themselves in a part of the channel just traversed, where it widened into a basin of some forty miles in extreme breadth, now called Hall Basin, and beyond this found a strait trending northeast.

This strait, which is about twenty to twenty-five miles in width, is bordered by high mountainous land, broken here and there by ravines, but in general presenting a perpendicular line of cliffs. During the remainder of the night, and for several hours of the early part of the thirtieth, the ship was kept moving toward the north; immense ice-fields were passed, increasing in size and number. At 6 a. m. the highest point was reached. The ice then became so compact that it was impossible to force the vessel through. No open water was seen further north. The *Polaris* had reached the limit of her voyage. "We saw firm ice from one coast to the other," says the only record that has been preserved. Fogs had prevented observations being taken, so that the latitude reached could not be recorded with exactness, but from careful calculation based on all the records procurable,

the Hydrographic Office published as a result of their revision that the highest point reached by the *Polaris* was 82° 11′, a point far beyond all previous navigation towards the Pole. The strait in which she found herself was called Robeson Strait, after the Secretary of the Navy, and the ice-bound ocean beyond was named Lincoln Sea.

The expedition went into winter quarters in Thank God Harbor, September 1, 1871, but the death of Captain Hall virtually put an end to its work. The ship was locked in its harbor by Providence Berg, a huge iceberg, to which she had been fastened during the winter, and from which she was not released until July, 1872. She cruised among the floes and bergs of Kennedy Channel and Smith Sound during August and September, 1872, vainly trying to force her way southward. Early in October, fearing her destruction by a nip, stores were got on the floes. On the second of the month the floes parted, and a portion of the expedition, nineteen in number, were cast adrift, spending the winter on their ice-raft, and were finally picked up by the British sealer *Tigress* on April 30, 1873, off the coast of Labrador. The party remaining with the ship was at last compelled to abandon her, and was rescued by the Scotch whaler *Ravenscraig* in June, 1873.

Inspired thereto by Dr. Petermann, of Gotha, his German countrymen were moved to take their share in the work of polar discovery. An expedition was organized in 1868 under the command of Captain Koldewey,

and provisioned for two years. It consisted of the *Germania*, a screw steamer of 170 tons, and the brig *Hansa*, commanded by Captain Hegemann. The ship left Bremen on June 15, 1869, destined for the east coast of Greenland. The *Hansa* got separated from her consort in latitude 70° 46′ N., and was crushed in the ice. Her crew escaped, taking refuge on a large floe. Here they improvised a hut built of patent fuel, in which strange refuge they spent and celebrated Christmas. By the following May they had drifted 1100 miles on their ice-floe, and at last, on June 14, 1870, they arrived safely at the Moravian mission station of Friedriksthal, west of Cape Farewell. The *Germania* sailed up the east coast of Greenland as high as 75° 35′ N., and eventually wintered at the Pendulum Islands in 74° 30′ N. In March, 1870, traveling parties set out under Koldewey and Payer, the future discover of Franz Josef's Land; they reached a point 100 miles to the northward of the ship, when they were compelled to return for want of provisions. A grim cape, named after Bismarck, marked the northern limit of their discoveries. In latitude 73° 15′ N. a deep branching fiord was discovered stretching a long distance into the interior of Greenland. Along its shores are peaks 7000 and 14,000 feet high. The party encountered numerous herds and shot many musk-oxen.

Lieut. Payer was resolved to continue in the path of polar discovery, and as a preliminary, he and an officer of the Austro-Hungarian Navy freighted a Norwegian schooner, the *Isbjörn*, and in the summer of 1871

examined the edge of the ice between Spitzbergen and Nova Zembla. On July 14, 1872, the two explorers left Tromsö in the steamer *Tegethoff* during an exceptionally severe season, and the vessel was soon beset with ice. The summer of 1873 found her still a close prisoner near Cape Nassau at the northern end of Nova Zembla, but on August 31, a mountainous country was sighted, and in October the vessel had drifted to within three miles of an island in latitude 79° 54′. There a second winter was spent. Bears were very numerous and sixty-seven were killed, their meat proving an effective remedy against scurvy. The newly discovered country was found to equal Spitzbergen in extent, to be divided into two or more masses, and to extend to latitude 82° N. The mountains attained a height of 2000 or 3000 feet, the depressions between them being covered by glaciers and the interior surmounted by an ice-cap. The country was named after the Emperor of Austria, Franz Josef's Land. The party was obliged to abandon their ship and attempt a retreat in open boats, and were at last picked up by a Russian schooner and arrived at Vardö September 3, 1874.

In October, 1874, spurred to action by the gallant enterprise of other countries, the then prime minister of England announced that an expedition would be started out in the following year to renew polar exploration. The route by Smith Sound was selected, and two powerful steamers, the *Alert* and *Discovery*, were commissioned. Captain Nares was placed in command.

The expedition left Portsmouth on May 29, 1875, and entered Smith Sound towards the end of July. After herculean difficulties with the drifting packs Lady Franklin Bay, in latitude 81° 44′, was reached, where the *Discovery* was established in winter quarters. The *Alert* pressed on and reached the edge of the paleocrystic sea, the ice floes being from 80 to 100 feet in thickness. Leaving Robeson Strait the vessel made progress between the land and the grounded ice pieces and passed the winter off the open coast, and facing the great polar pack in 82° 27′ N., at a point 16′ further north than the highest reached by the *Polaris*. On April 3, 1876, sledging parties started from both vessels. Captain Markham and Lieut. Parr advanced over almost insurmountable difficulties over the polar pack to a higher latitude than was ever before attained, 83° 20′ 26″ N. The coast line to the westward, facing the frozen ocean, was explored, as well as over 300 miles of new coast line along the northern coast of Greenland, the difficulty of the work being increased a hundred-fold by the party being attacked by scurvy. A series of magnetic, meteorological and tidal observations completed the useful work, and the expedition returned to England in October, 1876.

In 1879, a party, consisting of Lieut. Schwatka, U. S. A., and three others, set out overland with the object of throwing further light on the sad history of the retreat of Sir John Franklin's expedition, by examining the west coast of King William's Island in the summer

when the ground would be free of snow. They wintered near Chesterfield Inlet, on Hudson's Bay. On April 1, 1879, they set out for the estuary of the Great Fish River, taking only very little provisions and assisted by Eskimos and dogs. Their reliance was mainly on game, in which they were favored by fortune, killing no less than 522 reindeer on the trip. The cold of the winter in this region is intense, the thermometer falling as low as 70° below zero, so that the return journey, which was begun in November, was most remarkable. Little was left to be done with regard to the search after McClintock and Hall, but some graves were found, as well as a medal belonging to Lieut. Irving, of the *Terror*, and some bones believed to be his were brought home and interred at Edinburgh.

In 1879 James Gordon Bennett, of the New York *Herald*, decided to fit out an exploring expedition into Arctic waters, to proceed by way of Behring Strait westward. The yacht *Pandora*, in which Sir Allen Young had in 1875 so nearly succeeded in penetrating Peel Sound and the northwest passage up to the point reached by Franklin, was bought and rechristened the *Jeannette*. She was provisioned for three years, and the undertaking having been made a national one by special act of Congress, the expedition sailed from San Francisco on July 8, 1879, under the command of Lieut. De Long, of the United States Navy. The vessel was last sighted on September 3 steaming towards Wrangell Land. No tidings having come from the *Jeannette*, in 1881 two

steamers were sent in search. One of them, the *Rodgers*, reached Wrangell Land, on the south side of which she anchored in a good harbor. The land was explored and discovered to be an island about seventy miles long, with a ridge of hills traversing it east and west. The *Rodgers* then penetrated to the north of it and examined the edge of the polar ice, reaching latitude 73° 44′ N., the highest ever attained on the Behring Strait meridian. No news was obtained of the missing expedition, but soon after the melancholy tidings came from Siberia that the *Jeannette*, after having been beset in the heavy packs for twenty-two months, was crushed in the ice and sunk on June 12, 1881, in latitude 77° 15′ N., longitude 155° E. The crew dragged three boats over the ice, reaching an island, which they called Bennett Island, on July 29. They reached the New Siberia Islands on September 10, and on the twelfth set out for the mouth of the Lena. The boats were separated in a gale on the same evening. One of the boats was lost, but the one under Engineer Melville made the land of the Lena delta, and he ultimately reached Irkutsk, where, getting assistance, he started out in search of De Long, who had also landed. Eventually Melville discovered the dead bodies of De Long and two of his crew on March 23, 1883. They had died of hunger and exhaustion.

At an international polar convention held in Hamburg, 1879, followed by another in St. Petersburg in 1880, it was resolved by the representatives of the nations of Europe and America to establish a number of stations,

one or more by each nation, where synchronous observations should be taken, beginning August, 1882. America sent two expeditions, one to Point Barrow, on the northern shores of Alaska, under Lieut. Ray, U. S. A., and one to Lady Franklin Bay, in latitude 81° 44′ N., where the *Discovery* had been in winter quarters in 1875–'76. On August 11, 1881, the steamer *Proteus*, after an unusually successful trip, reached Lady Franklin Bay with a party consisting of Lieut. Greely and two other lieutenants and twenty sergeants and privates of the United States Army, accompanied by Dr. Pavy. The series of meteorological and magnetic observations agreed upon were at once commenced and the winter passed without accident. In the summer of the following year several detached parties were sent out on exploring expeditions, one of them consisting of Lieut. Lockwood and Sergt. Brainard, traveling along the northern coast of Greenland and beyond until they reached a small island north of this coast in latitude 83° 44′ N., longitude 44° 5′ W., the highest north ever attained. The interior of Grinnell Land was also explored, and a fiord discovered entering the land from the west.

A rescuing party failing to arrive, although expeditions had been sent in 1882 and in 1883, both of which failed to reach them, a retreat in boats was begun on August 9 of the latter year, with the expectation of finding a relieving vessel in Smith Sound. They reached Cape Sabine, where they were obliged to encamp for the winter, on October 21, 1883. Here the remnant of the

party was rescued in the following year by the steamers *Thetis* and the *Bear*. They had found a cache of provisions left at Cape Sabine by Nares in 1875, but when that was exhausted a period of indescribable horror ensued. Lieuts. Greely and Danenhower and five others were discovered in a tent just barely alive, and the surrounding graves and unburied dead told a ghastly and frightful tale.

These two disasters following so quickly one upon the other promised to put an effectual stop to all far northern exploration; and from the time of the rescue of the survivors of the Greely party none of any importance was undertaken until that of Lieut. Peary, excepting only that of Nansen, in 1888. With four companions, starting from Kioge Bay, on the east coast of Greenland, the latter accomplished successfully and proved the practicability of the crossing of and traveling upon the interior ice-cap. They had no draught animals, and dragged all of their supplies on sledges, and finally landed on the west coast near Godthaab.

The interest aroused by the success of Lieut. Peary's undertaking is world-wide. No less than three expeditions are in project to depart next year, and it may be said, without exaggeration, that he has auspiciously opened a new era of polar enterprises.

THE RECEPTION

At the Academy of Natural Sciences.—The Invited Guests.

THE following distinguished people were invited to and nearly all attended the reception given at its hall (Logan Square), on September 18, 1892, by the Academy of Natural Sciences to Lieut. and Mrs. Peary and the members of the Relief Expedition and of the other Arctic expeditions of the Academy :

Arnold, Crawford,
Archambault, V. F.,
Archambault, V. F., Jr.
Ashhurst, Dr. John,
Ashhurst, Richard L.,
Austin, R. L.,
Baily, Joel J.,
Baird, Henry Carey,
Banes, Col. Chas. H.,
Baugh, Daniel,
Baugh, Samuel,
Bayard, Hon. Thos. F.,
Beaver, Gen. J. A.,
Beitler, A. M., Dir. of Pub. Safety.
Benson, Edwin N.,
Betts, Chas M.,
Betz, J. F.,
Biddle, Alex.,
Biddle, Arthur,
Biddle, Henry W.,
Billings, John S., M.D., U. S. A.
Bispham, George T.,
Bladen, Mrs. E. S.,
Blankenburg, Rudolph,
Boardman, Rev. G. D.,
Bonzano, Maximilian F.,
Borie, Beauveau,
Bosbyshell, Oliver C.,
Bowman, Col. W. P.,
Boyer, Hon. H. K.,
Brown, Alexander,
Brown, J. A., Jr.,
Brown, Moses,
Brown, T. Wistar,
Buckley, Edw. S., Jr.
Bullitt, J. C.,
Burnham, Geo.,
Burnham, Geo., Jr.
Cadwalader, Richard McCall,
Campbell, J. D.,
Campbell, Miss M. A.,
Carson, H. L.,
Cartledge, Miss Elizabeth,
Cassatt, Alexander J.,
Castner, Samuel, Jr.,
Chambers, Dr. J. P.,
Chandler, Th. P.,
Chauncey, Charles,
Childs, George W.,
Claghorn, J. Raymond,
Clark, C. Howard,
Clark, Edward S.,
Cleeman, Ludovic C.,
Cleeman, Dr. R. A.,
Coates, Edward H.,
Coates, Henry T.,
Cochran, Travis,
Cochran, T.,
Coffin, Lemuel,
Coles, Edward,
Collins, Fred.,
Comegys, B. B.,
Converse, J. H.,
Cook, Joel,
Cooper, Col. C.,
Cooper, Hon. Th. V.,
Cope, Alfred,
Cope, Miss C.,
Cope, Miss C. E.,
Corson, Robert K.,
Coxe, Brinton,
Coxe, Eckley B.,
Coxe, E. Robert,

Cresson, George V.,
Crilly, Col. Francis J.,
Cullinan, Col. R. F.,
Cunningham, Peter F.,
Cuyler, T. De Witt,
DaCosta, Dr. J. M.,
Dallam, David English,
Dallas, Hon. George M.,
Dana, Chas. E.,
Darley, Francis T. Sully,
Darrach, Dr. James
Davis, L. Clarke,
Davisson, J. H. A.,
Dechert, Gen. Robert P.,
Devenny, Chas. F.,
Dickson, L. Taylor,
Dickson, Samuel,
Disston, Hamilton,
Dolan, Thomas,
Drexel, A. J.,
Dropsie, Moses A.,
Dutton, William Dalliba,
Elkins, William L.,
Elliot, A. G.,
Ellis, J. B.,
Erringer, J. L.,
Everhart, B. M.,
Febiger, Charles C.,
Fell, J. R.,
Fetterolf, A. H.,
Field, Hon. J. T.,
Filbert, Dr. Ludwig S.,
Fitler, Hon. E. S.,
Flick, Lawrence, M. D.
Foss, Rev. C. D.,
Foulke, J. Roberts,
Fraley, Fred.,
Furness, H. H.,
Goodell, Dr. Wm
Goodell, Dr Wm. C.
Goodwin, William,
Graham, Hon. Geo. S.,
Gregory, Dr. H. D.,
Griscom, Clement H.,
Hacker, Charles,
Hacker, William.
Haines, C. W.,
Haines, Mrs Jane R.,
Hallowell, Mrs. S. C. F.,
Hallowell, Miss J. F.,
Hancock, G. C.,
Harlan, Dr. G. C.
Harding, G.,
Harris, J. S.,
Harrison, C. C.,
Hart, Byerly,
Hart, Thomas, Jr..
Hartshorne, Charles,
Harvey, A. E.,
Hastings, Gen. D. H.,
Hays, I. Mines, M. D.
Hazlehurst, H.,
Head, Mrs. Eliz.,
Head, Mrs. Harriet,
Healy, Dr. J. J.,
Heebner, Charles,
Henry, C. W.,
Henry, J. B.,
Henry, M. P.,
Hersty, Ed., Jr.
Hewitt, G. W.,
Hewitt, W. D.,
Hollingsworth, S. G.,
Holmes, Miss M. S.,
Houston, W C., Jr.
Howe, Dr. H.,
Howell, Zophar Lanning,
Hunt, Dr. William,
Hulburt, Rev. Dr. Merritt,
Hutton, Addison,
Ingham, Dr. James V.,
Ingham, William A.,
Ingham, Wm. H.,
Ingersoll, Charles Edward,
James, Prof. E. J.,
Jamison, B. K.,
Jastrow, Rev. M.,
Jayne, Henry LeBarre,
Jayne, Dr. Horace,
Jenkins, Theodore F.,
Johnson, John G.,
Jones, Charles Henry,
Jones, Joseph L.,
Joyce, William H.,
Judson, Dr. O. A.,
Justice, William W.,
Keefe, Jos. I.,
Keen, Dr. Charles,
Keim, George DeB.,
Keller, Dr Ida A.,
Kern, William H.,
Kernan, Peter F.,
Kromer, Miss L.,
Krumbhaar, C. H.,
Lambdin, Dr. Alfred C.,
Lambert, John,
Landell, Edwin A.,
Landreth, Burnett,
Lankenau, J. D.,
LaPlace, Dr. E.,
Latta, Gen. W J.,
Lea, Henry C.,
Leaming, Thomas,
Leidy, Dr. Jos., Jr.
Lewis, Enoch,
Lewis, George T,
Lewis, Miss Graceanna,
Lewis, Percy M.,
Lewis, Robert M.,
Libbey, Wm., Jr,
Lippincott, Craig,
Lippincott, J. B.,
Lloyd, Malcolm,
Lockwood, Wm. E.,
Longstreth, Dr. M.,
Logan, A. S,

The Reception Committee
of the
Academy of Natural Sciences of Philadelphia.
(Logan Square)

requests the pleasure of the company of

_____ and Lady.

on the evening of September _____ 1892.

to meet Mr. and Mrs. R. E. Peary, the other members of the Academy's Greenland Exploring Expeditions and the members of the Relief Expedition.

Logan, Hon. J. A.,
Loughlin, Rev. Jas. F.,
Lyndall, Miss E. M.,
McAleer, Hon. Wm.,
McClellan, Dr. G.,
McClure, Col. A. K.,
McConnell, Rev. S.D.,
McDonough, M. F,
McElwell, Chief Engineer Jackson,
McKean, Th.,
McLoughlin, Edward D.,
McMaster, Prof. James Bache,
McMichael, Walter,
McMurtrie, Richard C.,
MacVeagh, Hon. Wayne,
McVickar, Rev. W. N.,
McWade, R.,
MacIntosh, Rev. J. S.,
Maitland, Miss Virginia,
Maloney, Martin,
Markoe, Gen. John,
Marshall, Dr. J.,
Martin, Dr. Edward,
Martin, Dr James,
Martin, Simon J.,
May, Rev. Jos.,
Meade, Col. George,
Megarge, Samuel J.,
Meigs, Dr. A. V.,
Merrick, J. V.,
Mitchell, J. K,
Miller, Prof. L. W.,
Mitchell, Dr. S. Weir,
Montgomery, Th. L.,
Montgomery, Thomas H.,
Morais, Rev. S.,
Morrell, E. de V.,
Morris, Dr. Casper,
Morris, Effingham B.,
Morris, Harrison S.,
Morris, I. W.,
Morris, Dr. J. C.,
Morton, Dr. Th. S. K.,
Mucklé, Col. M. R.,
Muhr, Simon,
Myhlertz, F. F.,
Newbold, Clement B.,
Norris, Dr. Isaac,
Norris, Dr. Wm. F.,
O'Brien, A. H.,
O'Hara, Dr. Michael,
Packard, Dr. John,
Page, S. Davis,
Parrish, Joseph,
Parsons, James,
Patterson, Hon. R,
Patterson, C. Stuart,
Pattison, Hon. R. E.,
Paul, J. W.,
Paul, James W., Jr.
Paul, John Rodman,
Penrose, Boies,
Penrose, C. B., M. D.
Penrose, Dr. R. A. F.,
Pepper, Dr. William,
Pepper, William Platt,
Perot, T. Morris,
Phillers, Geo.,
Phillips, H., Jr.
Piersol, Dr. G. A.,
Platt, Charles,
Porter, Dr. Wm. G.,
Potts William J.,
Preston, G. R.,
Prevost, Sutherland M.,
Price, Thomas C,
Pugh, Charles E.,
Rawle, Frederick,
Rawle, W. Brooke,
Reeves, Franklin B.,
Repplier, Miss Agnes
Rhawn, William H.,
Rhoads, Miss Beulah,
Riter, Hon. F. M.,
Roberts, G. B.,
Roberts, Israel,
Rogers, Charles R.,
Rogers, Col. J. I.,
Roth, Prof. E.,
Ryan, Right Rev. J.P.,
Ryerss, Robert W.,
Sachse, J. F.,
Samuel, John D.,
Sartain, Miss Emily I.,
Schimpf, Jacob,
Scott, Hon. John,
Scott, Lewis A.,
Scott, William H.,
Scull, David,
Seiss, C. Few,
Seiss, Rev. J. A.
Sellers, Coleman,
Sellers, Coleman, Jr.
Sellers, David W.,
Sellers William,
Shelton, Fr. R.,
Sheppard, Furman,
Shipley, Samuel R.,
Shippen, Edward.
Shively, Miss M. E.,
Shortridge, N. P.,
Sims, John C.,
Singerly, Wm. M.,
Sinkler, Dr. W.,
Sloan, Prof. W. M.,
Smith, C Morton,
Smith, Maj. H. E.,
Smith, R,
Smith, W. G.,
Smith, Gen. W. M. F.,
Snowden, Gen. G. R.,
Spellisy, Dr. Jos. M.,
Spellisy, P H,
Spencer, John T.,
Stearne, I. A.,
Steele, Edward T.,
Steele, H. M.,

Stern, S. A.,
Stewardson, John,
Stewardson, Thomas,
Stewart, Hon. Wm. F.,
Stillé, Prof. Ch. J.,
Stilring, Edm.,
Stoddart, J. M.,
Stone, Frederick D.,
Stotesbury, Edward T.,
Strawbridge, Justus C.,
Stuart, Hon. Edwin S.,
Sullivan, Jeremiah J.,
Sullivan, John,
Sulzberger, M.,
Sweigard, J. A.,
Tatham, William P.,
Thayer, Hon. M. R.,
Thayer, Gen. Russell,
Thomas, Dr. C. H.,
Thomas, Dr. Chas. M.,
Thomas, Frank,
Thomas, George,
Thompson, Prof. Robert Ellis,
Thomson, Dr. Wm.,
Tilghman, Benj. C.,
Tilghman, Richard A.,
Toland, Edward D.,
Tower, Charlemagne, Jr.,
Townsend, Joseph B.,
Trotter, C. W.,
Troutman, G. M.,
Tryon, Miss A. S.,
Tyson, Edward T.
Vaux, J. W.,
Walk, Dr. J. W.,
Walter, Miss Emma,
Walton, J. S.,
Warburton, Col. C. F.,
Warren, Gen. L. H.,
Warwick, Charles F.,
Watson, James V.,
Weightman, William,
Weightman, Mrs. William, Jr.,
Weil, Edward H.,
Welsh, Edward L.,
Welsh, Herbert,
Westergaard, Lars,
Wetherill, Charles,
Weygandt, C. M.,
White, H.,
White, Richard P.,
Widener, P. A. B.,
Wiedersheim, Theodore E.,
Williams, Talcott,
Williams, Miss L. L.,
Willson, Hon. Robert N.,
Wilson, Joseph M.,
Wiltbank, W. W.,
Windsor, J. D.,
Winsor, William D.,
Wistar, Edward M.,
Wistar, Dr. Thomas,
Wister, Mrs. A. C.,
Wister, Rodman,
Wister, W. Rotch,
Wister, W. Wynne,
Wormely, Dr. Theo. G.,
Wood, R. Francis,
Wood, Geo.,
Wood, Richard,
Wood, William E.,
Wright, C. B.,
Wright, Wm. B.,
Wurts, C. S.,
Yarnell, Ellis,